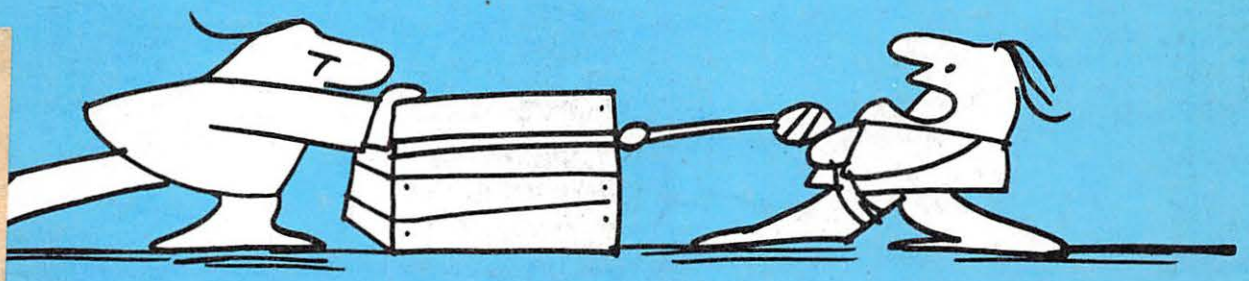
May 27, 1974

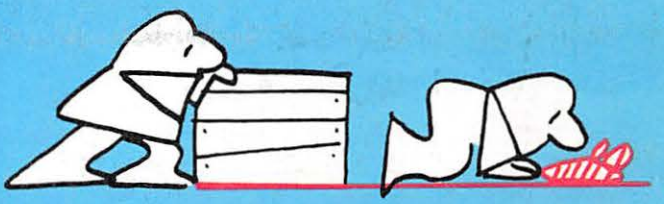
RAILWAY AGE

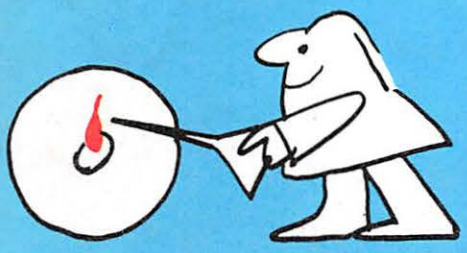
HN74 7
JAMES P CHEW
900 NORTH 4TH ST
JEANNETTE PA 15644

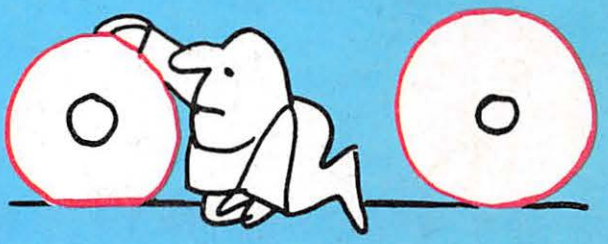


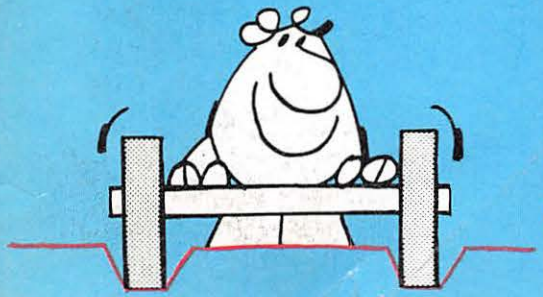
SPECIAL REPORT

FREIGHT LOGIC AND THE FUEL SHORTAGE









the long and short of it, or the short and long of it . . . INCINOLET S-SHORT

Research Products, at the request of Union Pacific Railroad, has altered its Model S into INCINOLET S-SHORT to retrofit UP's short-nosed locomotives (GE U50s).

Research Products/Blankenship, with either Model S or S-SHORT, will be glad to work with other lines to accomplish INEXPENSIVELY, IMMEDIATELY the new pollution laws of the nation.

Versatility-Design / Work with the Railroad Industry puts RP/Blankenship's electric-incinerating toilets (74 v.d.c. - 2400 watts) no farther away as a solution than one's hand on the telephone.

Call in your troubles to us (collect, of course).

RESEARCH PRODUCTS *Blankenship*

TELEPHONE 214/358-4238 • TELEX CODE 730-16 • 2639 ANDJON ST. • DALLAS, TEXAS 75220

IN CANADA . . . RESEARCH PRODUCTS / BLANKENSHIP OF CANADA, LTD. 18 CANSO ROAD, REXDALE (TORONTO) ONTARIO

742

Circle 1 on Reader Service Card

WHO SAYS GOOD IDEAS ARE SCARCE?

Obviously, someone who has never seen a copy of **RAILWAY AGE.** Just count those in this issue. Wouldn't it help your staff, department officers and assistants to read it; and wouldn't they appreciate having their own copies to read at home?

_____Use this card to subscribe for yourself or an associate.

_____If you order 2 or more subscriptions (please list the names, company, titles, addresses and job responsibility information on a separate sheet) the money-saving two year rate is only $12.00

Remember—just **one** good idea from **RAILWAY AGE** could pay for reading it the rest of your life!

ENCLOSE CHECK WITH ORDER AND GET EXTRA ISSUE AT NO ADDED COST.

May 27, 1974

OK

Enter my personal subscription to RAILWAY AGE

(Published twice each Month)

☐ $12 2 YEARS ☐ PAYMENT ENCLOSED

☐ $8 1 YEAR ☐ BILL ME LATER

☐ **If you are renewing your present subscription check here and attach your address label.**

Name _____

Please print or typewrite

Address ☐ **Business** ☐ **Home** _____

City, State, ZIP _____

Railroad or firm _____

Department _____

Job or title _____

You also need one of these specialized monthlies:

	1 yr.	2 yrs.
☐ RAILWAY LOCOMOTIVES & CARS	☐ $4	☐ $6
☐ RAILWAY TRACK & STRUCTURES	☐ $4	☐ $6
☐ RAILWAY SYSTEM CONTROLS	☐ $4	☐ $6

Above rates apply only to railroad and industrial traffic men in U.S. and possessions, Canada and Mexico. Foreign and non-industry rates on request.

WHO SAYS GOOD IDEAS ARE SCARCE?

Obviously, someone who has never seen a copy of **RAILWAY AGE.** Just count those in this issue. Wouldn't it help your staff, department officers and assistants to read it; and wouldn't they appreciate having their own copies to read at home?

_____Use this card to subscribe for yourself or an associate.

_____If you order 2 or more subscriptions (please list the names, company, titles, addresses and job responsibility information on a separate sheet) the money-saving two year rate is only $12.00

Remember—just **one** good idea from **RAILWAY AGE** could pay for reading it the rest of your life!

ENCLOSE CHECK WITH ORDER AND GET EXTRA ISSUE AT NO ADDED COST.

BUSINESS REPLY MAIL
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

FIRST CLASS
PERMIT NO. 153
NEW YORK, N.Y.

POSTAGE WILL BE PAID BY:

R. R. INFORMATION HEADQUARTERS
SIMMONS-BOARDMAN
PUBLISHING CORPORATION
BOX 530
BRISTOL, CONN. 06010

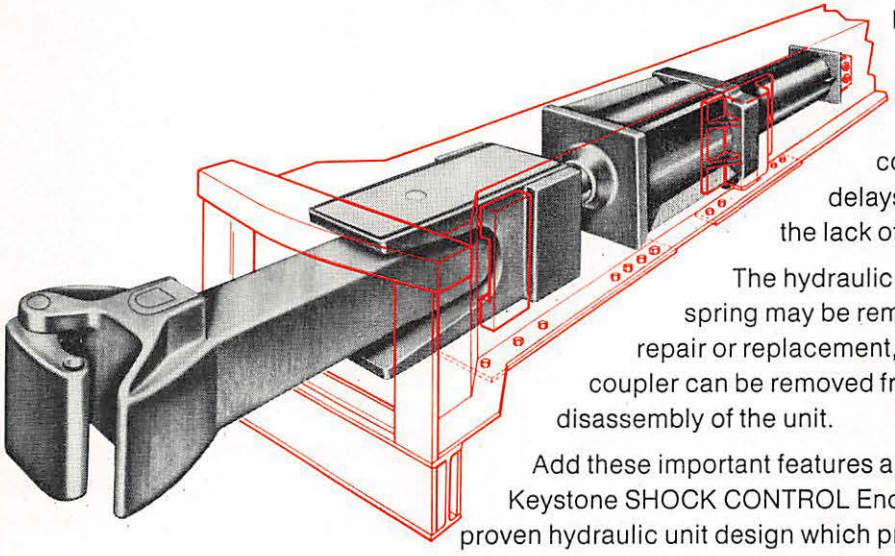
If you're looking for a simple, economical, easy to maintain EOC cushioning device that provides

proven, effective impact protection and Train Action Control

here it is!

KEYSTONE SHOCK CONTROL MODEL EOC

Keystone offers the Model EOC End-of-Car device in a number of different application designs to meet variations in car construction, overhangs and deck heights.



Each design utilizes the same basic parts, offering important savings in inventory costs and minimizing car delays that often result from the lack of special parts.

The hydraulic unit, yoke and return spring may be removed for convenient repair or replacement, if necessary. The coupler can be removed from the car without disassembly of the unit.

Add these important features and considerations to the Keystone SHOCK CONTROL End-of-Car System's proven hydraulic unit design which provides excellent impact characteristics in addition to *train control* in both buff and draft. See why you should get complete information and facts from Keystone before you invest in any EOC system.

For Technical Information—
Write or call for new "Engineering Facts about KEYSTONE Shock Control Cushioning and Train Handling Characteristics"

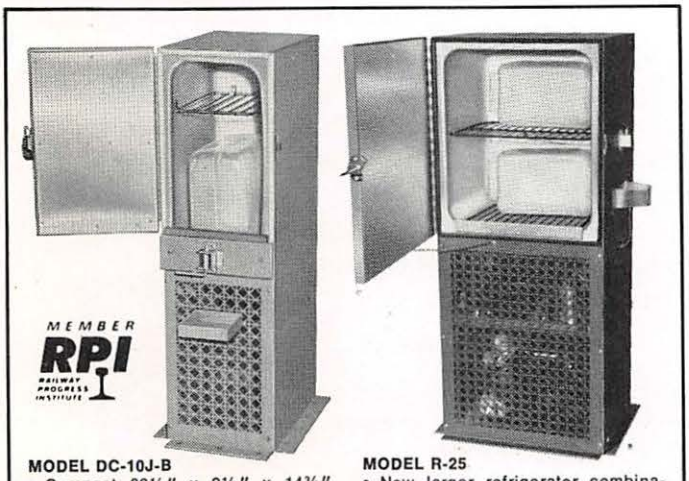
KEYSTONE RAILWAY EQUIPMENT COMPANY
Division of KEYSTONE INDUSTRIES, INC.
Simpson Ferry Road • Camp Hill, Pennsylvania 17011
Telephone: 717/761-3690

731

Circle 7 on Reader Service Card

Stanray meets your needs.

Introducing disposable water bags.



MODEL DC-10J-B

- Compact 33½" x 9½" x 14¾" design has big 9 cu. ft. capacity.
- Lifetime stainless steel liner with urethane insulation all around.
- Available with disposable 2 gallon plastic water bag.
- Existing water cooler with glass bottle can be converted with conversion kit.

MODEL R-25

- New larger refrigerator combination has 2.5 cu. ft. capacity.
- Compact 40" x 19" x 16" design.
- 2-gallon plastic water bag (optional).
- Lifetime stainless steel liner, with twin plastic-coated racks.
- Sealed 110V AC compressor (optional).

Stanray has developed new railroad refrigerators that hold one or two-gallon disposable plastic water containers.

That ends the nuisance of returning glass jugs for refill. Ends the hazard of breakage. Ends the mess and waste involved with half-pint containers. It's the beginning of better sanitation, and economy. Economy because a 2-gallon bag costs less than the cost of cleaning bottles.

STANRAY CORPORATION
Standard Railway Equipment Division
HAMMOND, INDIANA • CHICAGO, ILLINOIS
IN CANADA: Davanac Industries, Montreal, Quebec

Circle 4 on Reader Service Card

RAILWAY AGE

May 27, 1974 • Vol. 175 No. 10

Editorial and Executive Offices
New York, N.Y. 10013, 350 Broadway
(212) 966-7700
ROBERT G. LEWIS: Publisher
LUTHER S. MILLER: Editor
FRED C. MILES: Executive Editor
Mechanical: Fred N. Houser
Signaling & Communications:
Al Klinger
Transit: Tom Kizzia
Art Director: Maurice H. Mates
Editorial Assistant: June Meyer
Production Manager: Ruby M. Yee
Manager—Contract Department:
Constance Nicolai
Editorial Consultant: George Dusenbury
Marketing Manager: Saul Adler

Editorial and Executive Offices
Chicago, Ill. 60602, 29 E. Madison St.
(312) 641-5815

REID KENEDY: Vice President-Sales
GUS WELTY: Senior Editor

Engineering:
Merwin H . Dick R.E. Dove

Editorial Assistant: Wanda Brown

Washington, D.C. 20004,
National Press Bldg. (202) 347-1155
Washington Editor: Richard M.M. McConnell

Falmouth, Cornwall, TR11 4RJ, England
P.O. Box 8 (Cable: MISBOARD)
Telephone: Falmouth 313512

International Editors:
John Levett Paul Goldsack

Railway Age, established in 1856, is indexed by the Business Periodicals Index and the Engineering Index Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.
Published semi-monthly by the Simmons-Boardman Publishing Corporation, 508 Birch St., Bristol, Conn. 06010.
Railroad employees' subscription rate, U.S. possessions, Canada and Mexico, $8 one year, $12 two years, all others $17 for one year, payable in advance and postage paid. To railroad employees elsewhere in the western hemisphere, $20 a year; in the eastern hemisphere, $20 a year. Single copies 80¢, except special issues.
Address all subscriptions, change of address and correspondence concerning them to Subscription Dept., Railway Age, P.O. Box 530, Bristol, Conn. 06010.
Change of address should reach us three weeks in advance of next issue date. Send old address with new enclosing, if possible, your address label. Post Office will not forward copies unless you provide extra postage.

Member of ABC Audited Paid Circulation RPI Railway Progress Institute

POSTMASTER—SEND FORM 3579 TO P.O. BOX 530, BRISTOL, CONN. 06010.

Printed at the Hughes Printing Co.,34 North Crystal St., East Stroudsburg, Pa. 18301. Second-class postage paid at Bristol, Conn., and at additional mailing offices.

Inside

LUTHER S. MILLER

PASS IT ALONG!

Those stout-hearted citizens who have plowed through the Oak Ridge National Laboratory's report on the efficient (and inefficient) uses of fuel in the transportation of freight know exactly where railroads finish in the energy-conservation sweepstakes: right up front. The story is also one that railroaders know well. But voters and the people they elect know only too little of it. It is with these people in mind that Railway Age presents in this issue George Dusenbury's sprightly illustrated essay, "Freight, Logic and the Fuel Shortage." Pass it along.

BRINEGAR: "THE ALTERNATIVES ARE TOO HORRIBLE"

During a panel discussion at the recent St. Anselm's College Transportation Seminar, Dr. Alexander Morton, an associate professor at the Harvard Business School who served as executive director of the Task Force on Railroad Productivity, observed with some passion that the Northeast Rail Reorganization Act was, in his view, a "disaster" that could lead only to nationalization. What was so astonishing was not that Dr. Morton said this (his views on the subject are well known) but that the audience, mostly shippers and truckers with a small sprinkling of railroad men, reacted the way they did: with the loudest cheers and applause of the day. When Southern's scholarly and soft-spoken Paul Banner, who is perhaps the best brain in the railroad marketing research business, took strong issue with Dr. Morton's statements, there was not a sound from the audience.

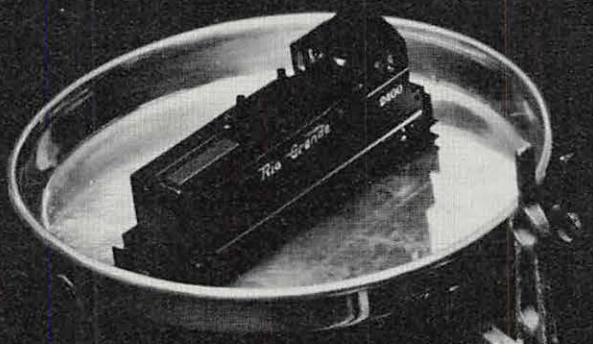
This incident is not an isolated one. More and more people are saying the Northeast Act can't work; many clearly hope it won't work.

Maybe they're right. We won't really know for another couple of years. Meantime, it seems to us that the most sensible statement on the Northeast in recent days has come from DOT Secretary Claude S. Brinegar.

Replying to those who have accused DOT of embarking on a line-abandonment binge, Brinegar emphasized that "we have not recommended massive track abandonments, but rather attempted to identify those light-density branch lines that are 'potentially excess' in an economic sense." But he added: "The system must be either streamlined or the rates raised on the light-density lines, or the extra costs picked up by local agencies so that eventually this rail operation can stand on its own feet. The alternative is piecemeal nationalization, with all its evils."

As for implementing the Act, Brinegar conceded that there are "still many hurdles ahead, including constitutional tests of the statute, approval of the final system plan by Congress, and the keeping of Penn Central alive (though far from well) in the interim." But he pledged: "Though it will be a rocky road, we will keep Penn Central going and we expect to see the new streamlined system emerge about on schedule. It better happen that way—the alternatives are all too horrible."

With that last statement, 60 big railroad customers who were recently surveyed by Railway Age would heartily agree. But while they find the prospect of nationalization just as "horrible" as does Brinegar, 75% of them feel the railroads are drifting in that direction. How these shippers think N-Day may still be averted is the subject of the article beginning on p. 24.



At Rio Grande, we use less energy to bring you more energy.

The energy crisis was a long time coming. It will be a long time leaving.

And, during the crisis, Rio Grande Railroad will be even more important than ever to the well-being and economy of our nation.

Because Rio Grande specializes in delivering vast amounts of coal to industrial doorsteps year-around.

Without using vast amounts of energy to do it.

Rio Grande has been the leader in innovative railroading, providing efficient, economical service as the "bridge" railroad of the Rocky Mountains, linking the East and West Coasts.

The need is greater now. We're meeting the need.

Rio Grande is on the job, as always.

Bridging the gap and bridging the Continent.

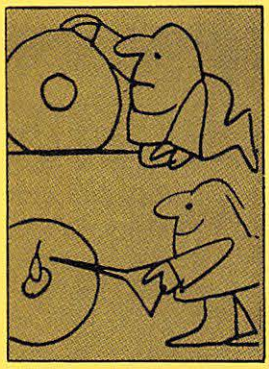
Rio Grande
the ACTION road

The Denver & Rio Grande Western Railroad

RAILWAY AGE

MAY 27, 1974

FEATURES



COVER

Editorial Consultant George Dusenbury designed this issue's cover (and also wrote the cover story). Jim Ruth did the cartoons.

Freight, Logic and the Fuel Shortage ..... p. 33

SHIPPER POLL: Are we drifting toward nationalization? ..... p. 24

Would greater reliance on railroads' energy efficiency aid U.S. economy? ..... p. 44

NEWS

Another "clean air" cost coming ..... p. 8

Coughlin retires, Whitmire new BLE chief ..... p. 8

Katy seeks a Federal loan ..... p. 8

DOT takes on the bureaus ..... p. 8

Railroad key to higher profits ..... p. 8

UP posts a gain, but– ..... p. 8

Clipper backs 10% rate increase ..... p. 8

L&D payout dips; first time in a decade ..... p. 10

MP attacks barge efficiency figures ..... p. 12

BN completing major microwave link ..... p. 18

Brinegar: Amtrak is being "politicized" ..... p. 18

Coal hauling has a bright future ..... p. 52

AAR's TRAIN II equipment being installed ..... p. 66

NW hoppers feature high cube ..... p. 66

Hartke concerned over truck future ..... p. 66

Motel modules moved to Minnesota ..... p. 66

U.S. Freight will be Transway ..... p. 66

Car supply picture brightens ..... p. 66

OPINION

INSIDE — Pass it along! ..... p. 5

LINES ON LABOR — First things first ..... p. 12

VIEWPOINT — L&D—It's time for an industrywide campaign ..... p. 70

WATCHING WASHINGTON — Uncle Sam in the driver's seat? ..... p. 14

DEPARTMENTS

Advertising Sales Offices ..... p. 69

Calendar ..... p. 68

Carloadings ..... p. 65

Market Outlook ..... p. 65

New Products ..... p. 59

People in the News ..... p. 42

Piggyback Loadings ..... p. 65

75 Years ago ..... p. 62

Suppliers ..... p. 43

Short and Significant

RAILROAD KEY TO HIGHER PROFITS

Burlington Northern Chairman and Chief Executive Officer Louis W. Menk says he's "greatly encouraged" by recent gains in the financial performance of BN's Transportation Division. Moreover, he told shareholders at BN's annual meeting, "the railroad not only is our largest earning asset but also the one with the greatest potential for profitability, especially in the energy-short economy in which we are living." As for the business the railroad is doing, Menk pointed out that volume has grown by 30% in four years—and that by 1979 BN expects to be handling 60% more volume than at present.

UP POSTS A GAIN, BUT...

Higher revenues, lower interest costs and larger investment tax credits all contributed to an 8% increase in net income for Union Pacific Railroad during first-quarter 1974—but at the same time UP's operating income was down a bit, Chairman and Chief Executive Officer Frank E. Barnett told stockholders at the annual meeting, because rate increases came too late to offset sharp rises in the costs of labor and materials, mainly fuel. Still, he saw a bright outlook for both the railroad and UP's natural resources operations. Over-all, earnings were up by 40% for the first quarter and, Barnett said, "while we don't expect the percentage improvement for the year as a whole to match that in the first quarter, we are confident that UP is well-positioned for continued progress."

CLIPPER BACKS 10% RATE INCREASE

With railroads seeking to get their 10% rate increase into effect on June 5, they found an unexpected champion in Jerry Chambers, board chairman of Clipper Express. He has told ICC that low profits and high interest rates, coupled with the substantial energy savings of the rail mode, justify the increase. As a freight forwarder that did $14.5 million business with railroads last year, Clipper is ready to pay increased rates. "Even though theoretically it is to our disadvantage to have our line-haul costs increased, we recognize that the long-term good of the railroads is more important than any short-term profits we might make," said Chambers.

ANOTHER "CLEAN AIR" COST COMING

The "clean air" movement has caused problems for the auto industry, it's going to cause price boosts on 1975 cars—and now it's apparently going to bring-on yet another modification of rail and highway motor-vehicle carriers. As many as 10,000 rack-equipped low-deck flat cars may have to be fitted with special risers at both ends of each rack level in order to prevent damage to low-slung catalytic converters in loading and unloading operations.

COUGHLIN RETIRES, WHITMIRE NEW BLE CHIEF

One of the railroad industry's most respected labor leaders, C.J. Coughlin, will retire June 30, to be succeeded as president of the Brotherhood of Locomotive Engineers by B.N. Whitmire, now first vice president. Coughlin became grand chief engineer of the BLE in 1969, upon the retirement of Perry S. Heath, and was elected in his own right in 1971 (at which time the title was changed to president). Whitmire's successor as first vice president will be J.F. Sytsma, general secretary-treasurer.

KATY SEEKS A FEDERAL LOAN

Katy has become the second western road (Rock Island was the first) to seek Federal loan help under terms of the Northeast reorganization act. Katy's petition is for a long-term $16.9-million loan, with proceeds to be used for rehabilitating 110 miles of mainline in south Texas, acquiring additional motive power and covered hopper cars and beginning planning for a new yard at Parsons, Kan. Chairman and President R.N. Whitman notes that Katy has been making progress—with a 72% increase in revenues in the past nine years, with the catching-up on much deferred maintenance and with, occasionally, a profit at the end of the year. But, he says, the road faces many years during which its resources will be inadequate to complete the job.

DOT TAKES ON THE BUREAUS

The DOT-proposed Transportation Act of 1974 has provisions which would limit the activities of rate bureaus—but while that piece of legislation sits in Congress, DOT is taking another tack in trying to get limits imposed. According to DOT, in a filing with the ICC in Ex Parte 197, Rate Bureau Investigation, the bureaus do provide valuable services to members and shippers—but they also dampen competitive forces and discourage innovation in pricing and service. So far as railroad bureaus are concerned, DOT wants the ICC to prohibit them from voting on single-line movements and limit consideration of joint-line rates to those roads actually participating; to prohibit them from suspending rates set on independent action; to require them (and all bureaus) to dispose of a proposal within 120 days; and to require them to make voting records available for public inspection.

1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974

**RECORD SERVICE-PROVEN YEARS!
MARK 50 AND MARK R-500 DRAFT GEARS
CONSISTENTLY HAVE PROVIDED
SUPERIOR IMPACT PROTECTION—**

without revisions

In 1960 and 1962, respectively, the Mark 50 and Mark R-500 draft gears were the first to meet A.A.R. Spec. M-901E, leading the field. With superior design and constant utilization of the most modern engineering and manufacturing technology, these gears continue to assure years of trouble-free performance and maximum impact protection *without revisions.* There have been no failures in design, quality or performance.

The criteria of draft gear effectiveness is time-tested, reliable performance and protection against impact damage. *Without revisions* the Mark 50 and Mark R-500 meet this criteria with record application and service-proven performance on railways around the world. For freight cars of all types, 3¼" travel, 24⅝" pockets. Specify the *time-proven* leaders—Mark 50 and Mark R-500.

CARDWELL WESTINGHOUSE COMPANY
332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60604, U.S.A. • TELEPHONE: 312-427-5051
INTERNATIONAL DIVISION SAME ADDRESS
CANADIAN CARDWELL COMPANY, 1875-46TH AVE., LACHINE H8T QUEBEC 2N8 TELEPHONE: 514-636-4864

Circle 5 on Reader Service Card

L&D payout dips; first time in a decade

Final figures are in on 1973 rail freight loss-and-damage claim payout—and they more than justify the cautious optimism L&D-prevention officers were displaying a couple of months ago (RA, March 25, p. 17). The key statistics:

—Dollar payout declined by more than $1.9 million, from $234.5 million in 1972 to $232.5 million last year.

—The ratio of payout-to-revenue declined sharply, from 1.74 in '72 to 1.56 in '73.

To put the figures into perspective:

—In 1972, for the first time in a decade, L&D-prevention efforts paid off in a drop in payout. The drop, however, was only about $200,000 or little more than one-tenth of the improvement recorded in 1973. Significantly, the '73 showing came at a time when railroad business was up by about 8% and inflation was eating at the economy at a rate of 8% or worse.

—The payout-to-revenue ratio, which L&D-prevention specialists tend to regard as the real measure of performance, declined for the third straight year and, in fact, it declined by more than the experts thought it would, since preliminary estimates pegged '73 at about 1.65. It is true that rate increases built up the base against which payout is measured, but there were offsets on the other side, too, in terms of more business and more inflation which raised the value of commodities handled.

—If a couple of elements could be factored out of the totals, prevention-performance would be all the more impressive. One such element is one over which L&D-prevention people have no control: train accidents. In 1972, accidents resulted in payout of $32.7 million. In 1973, the total was $38.9 million, and the percentage of payout due to accidents rose from 14% to 16.7%. The second element, however, is one which does directly involve damage-prevention efforts, and it is a shocker: Payout on motor vehicles rocketed upward by 22.6%, from $34.3 million in 1972 to $42.1 million last year. Payout on motor-vehicle parts also went up, and when the two categories are added together it turns out that payout on vehicles and parts amounted to an even 20% of total 1973 payout. The figure in 1972 was 16.4%.

● **Most "causes" down.** Actually, 1973 showed an improvement in payout in eight of the 11 "cause" categories under which claim costs are reported. The three exceptions were train accidents, defective or unfit equipment and loss-other-than-entire-package. Even the "catchall" category, "improper handling-all damage not otherwise provided for," showed an improvement, with payout down by about $3.3 million and the percentage-of-total dropping from 57.6% in 1972 to 56.6% last year. (The fact that this one category accounts for well over half of all payout, however, would seem to indicate a real need for breaking it down further to try to determine what damage is really due to improper handling in trains and yards and what damage is due to other as-yet-undefined causes. At least one major road, Southern, is making a serious and comprehensive move in this direction.)

From an individual-commodity standpoint, 1973 saw a number of sharp fluctuations in dollar payout, year to year. Since the payout tabulation does not include revenue statistics, it is impossible to determine what part of these fluctuations may be due to increases or decreases in business. In any event, comparing last year to 1972, the commodity chart looks like this:

—Payout on basic agricultural products was up by more than 11%. In dollar terms, grain payout accounted for almost all of the increase, which should come as no real surprise in view of the tremendous increases in traffic.

What's being done about cargo theft?

It has never been easy to come up with an exact figure on losses suffered by railroads due to cargo theft—which may explain why estimates vary all over the lot. A few examples:

—Last year, DOT put the '72 out-of-pocket theft loss at close to $30 million and the total, including indirect costs, at something approaching $50 million.

—AAR-compiled figures on claim payout (for 1973) put theft at "only" $11.9 million. When two other payout categories are added, however—loss of entire package and loss of other-than-entire package—the total becomes approximately $25 million, and that is not far from the DOT estimate.

—Illinois Central Gulf President Alan S. Boyd has still another figure. He pegs the annual loss from cargo theft for all transportation at $1.5 billion (DOT has estimated it at $1.5 to $2.8 billion), and he says that "about $58 million is accounted for by thefts from railcars." Further, says Boyd, "The direct cost to railroads goes well beyond the actual value of the stolen goods. According to one recent calculation, railroads were spending 16 cents in paperwork for every dollar paid in claims."

Even though railroads in 1973 managed to cut payout in two of three theft-related categories, the picture remains less-than-bright. As Alan Boyd puts it, "Increasingly, it seems, railroads are growing popular not only with environmentalists and energy-savers but also with criminals. Railroads are particularly vulnerable to the bold new styles in crime."

What are railroads themselves doing to combat the problem? For one thing, maintaining what is probably the nation's largest private police force, numbering about 4,500 persons and maintained at an annual cost of between $80 million and $100 million. For another, running their own policy academy which is providing professional training for about 300 officers a year. For a third, trying to work more and more closely with all levels of law-enforcement in the public sector.

That last point is one that probably deserves even more attention than it has received. It is true that railroads need the help and cooperation of public-sector police. But, as Boyd pointed out to the Missouri Peace Officers Association, there is a flip-side: "Today, the public sector would be hard-pressed to meet the unique needs of the railroads for protection if the rails did not have their supplemental force of railroad police. Think what it would do to local, state and Federal government budgets to assume such a burden in full."

—Payout was up on metallic ores but down on coal.

—Payout on processed foods was down, over-all.

—Without attempting to interpret it in relation to much of anything, note that payout dropped on whiskey, wine and beer but went up on soft drinks. Payout was also down sharply on tobacco products. Significantly, perhaps, payout due to theft fell by about $100,000 on both whiskey and tobacco products, both prime targets of cargo thieves.

—Payout also dropped in the category covering such items as newsprint, chemicals and related products as well as in the categories covering primary and fabricated metal products.

—For the fourth year in a row, payout declined on household appliances, which have been the target of industry-wide damage-prevention work.

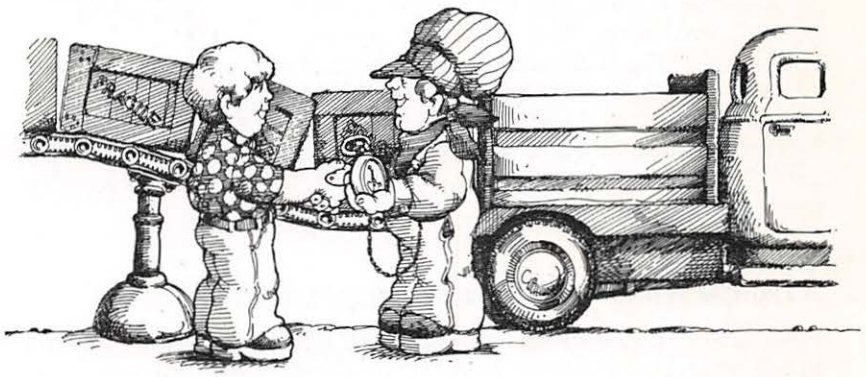
—As noted, payout on motor vehicles and parts soared.

—The payout record on freight-forwarder and shipper-association traffic was a mixed bag, with forwarder payout up and shipper-association payout down. (This could lead to a question as to what is happening to L&D insofar as TOFC/COFC operations are concerned, since both forwarders and shipper associations are major users of the service, and their traffic accounts for 4.5% of total payout. However, no over-all breakout of TOFC/COFC L&D is now made available.)

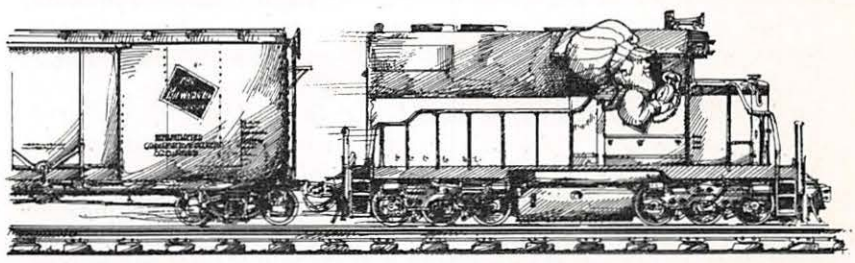
● **What it means.** Study of the figures would seem to show a no-question need for both research and action programs in several areas—but in no area does this need appear more clear than in Category 3711, motor vehicles. There is, first, the fact of the dollars involved—$42.1 million in '73. But there also seems to be the "fact" that there is no clear definition as to the specific cause of damage. On the 1973 chart, theft accounts for $2.9 million in payout and loss-other-than-entire-package adds almost $600,000. Train accidents account for $2.3 million. But of the $42-million-plus total, more than $36.1 million is lumped under "improper handling-all damage not otherwise provided for." To put it another way, the catchall category is 56.5% of *all* L&D payout—but it is roughly 85% of payout on motor vehicles. Therefore, the twin needs: Research, to prove what is actually happening; and action, to keep it from happening.

Less clear, perhaps, is the question of whether the grain-claim situation requires concerted action to attack a problem which may or may not be worsening out of proportion to the traffic handled. Payout did go up, from $6.9 million in 1972 to $10.1 million last year, or 45.5%. For comparative purposes, grain carloadings were up by 23.6%.

We run our freight trains on a very tight schedule. Yours.



Here at the Milwaukee Road, we know that to warrant your business, we must provide a freight transport system with train scheduling far beyond simple yard-to-yard movement. We believe you're best served with a *total* distribution system, geared to help you compete successfully in today's pressure-cooker marketplace. *That's the work of our Customer Services section.*



Working almost daily with our customers, our own motor carrier, and with other railroads, we're constantly seeking new ways to improve *total shipment* performance, not just *train* performance; how to speed the load, not just from

yard to yard, but from door to door. Tuning up scheduling. Tightening up our interchange and run-through services. Closer day-to-day monitoring of every car on the system.

THE MILWAUKEE ROAD

All aimed at putting your shipment where you want it, as quickly and as economically as possible. We believe that's the kind of service you want, and expect, from us.

America's Resourceful Railroad

Lines on Labor

GUS WELTY

FIRST THINGS FIRST

As that tender old ballad goes, ". . .and see what the boys in the backroom will have." Well, the boys (and girls) have spoken from the "backrooms" of railroading, from the yard office and the key-punch room and so forth. And what they want is money—which, in these inflationary time, should not come as any real surprise. They want money, followed in priority order by better pensions, improved job security and better vacation provisions. Not surprisingly either, the younger they are, the more they prize wage increases—and the older they are, the more they think about pensions.

A UNION POLL—AND WHAT IT MAY MEAN

With another round of collective bargaining coming up, the Brotherhood of Railway and Airline Clerks earlier this year did what it did in similar circumstances in 1972—poll the membership as to what the dues-payers think is important. Interestingly, BRAC did the polling this year just a bit differently. Two years ago, members could designate more than one item as "top priority." This time around, members were supposed to make their decisions on a strict 1-2-3 basis—because "it was felt that a clearer picture could be obtained by having each individual decide what was *the most important item.* In other words, if BRAC's negotiating team, or any negotiating team, could obtain significant improvements in *all* areas, there would be no need for a poll such as this to establish the collective priorities." (The added emphasis is BRAC's.) Interestingly, too, the ballot did not include mention of a cost-of-living escalator, nor did a c-o-l clause apparently get much of a write-in vote—which may in fact be surprising in view of continuing inflation. Possible conclusions: (1) BRAC knows that *everything* is not attainable, and wants the membership to know; and (2) BRAC members may prefer to take the money now and take a chance on inflation.

In BRAC's poll, wages were the major issue for almost 40% of those responding. For those in age groups up to age 50, wages were a 46% top-choice. Over-all, pensions pulled a 30% No. 1 vote. But pensions ranked only fourth among members 35-and-under, and a poor second in the 35-to-50 group. Vacation improvements ranked third for the youngest members and last for the oldest. Job security, which pulled a 13% top-priority vote over-all, ranked no worse than third in any of the age groupings. Wages were ranked 1, 2 or 3 by 81% of the respondents, pensions by 66%, job security by 40%, vacations by 32% and group insurance by 25%.

Credit Les Dennis and BRAC for wanting to know what the members want—but at the same time, wonder if the effort is worth it. More than 18,000 members took the time to complete and send in the poll questionnaire, up from 10,000 in 1972. But even the 18,000 represent only about 12% of eligible railroad employees. BRAC regards this as a good return, noting that other unions polling members on various issues "report a return of only 3% to 5%." Twelve percent. One member out of eight. One member out of eight willing to take a few minutes to let his elected representatives know what's important as regards the conditions of his job. OK, 12%. But 3% to 5%? It certainly does make you wonder.

MP attacks barge efficiency figures

In the past, when railroads have talked of their energy effectiveness, the emphasis has been on rail vs truck—probably because the two modes are broadly competitive and because studies showed substantial differences in energy effectiveness with railroads holding approximately a 4-to-1 edge. Not much has ever been said about rail vs barge—probably because the two modes are competitive only on certain commodities in certain areas and because studies showed no sharp differences in effectiveness.

Now, however, Missouri Pacific is challenging the barge figures, in connection with a proposed upper-Mississippi River waterway project. MoPac bases its challenge on two main factors: flaws in one widely-quoted energy study, and failure of studies to take into account circuity of barge operations.

MoPac charges first that a Rand Corp. study—which pegged rail Btu consumption per ton-mile at 750 and waterway at only 500—erred because (1) it didn't account for duplications in traffic data on waterways traffic, which resulted in a over-estimate of ton-miles and an under-estimate of Btu per ton-mile; and (2) it didn't subtract fuel used for rail passenger service, and thus it produced an over-estimate on total fuel and Btu per ton-mile consumed for rail freight traffic.

(MoPac also notes that an Oak Ridge National Laboratory study made later put rail Btu at 670 and waterway at 680 and it was these figures along with Rand's truck figure that were accepted in the Department of Transportation's 1973 energy report.)

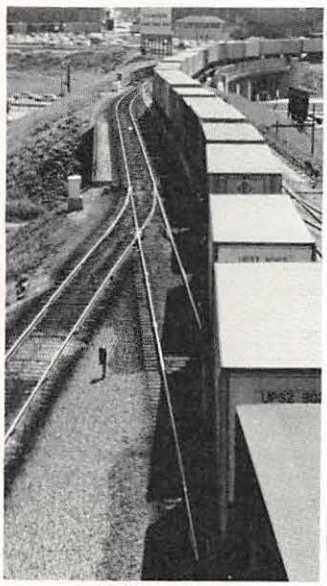
● **Around and around.** Perhaps more significant in the long-run, however, is the challenge based upon circuity. MoPac says it studied 55 rail/barge competitive moves and found that for those 55 moves, barge miles exceeded rail miles by 29.1%. Application of that 29.1% factor to ORNL's 680 Btu figure, the road notes, produces a waterway consumption of 878 Btu per net ton-mile for the movements studied.

Further, MoPac points out, little barge tonnage actually originates or is consumed right at riverbank points; thus, an added Btu factor should be added to cover energy consumption on that sizeable part of waterborne traffic "that must move considerable distances either to or from the waterway. Such movements generally are by the least fuel-efficient surface-transportation mode, truck."

Taking all things into consideration, Missouri Pacific concludes that rail haulage is more efficient than barge haulage "by a wide margin."

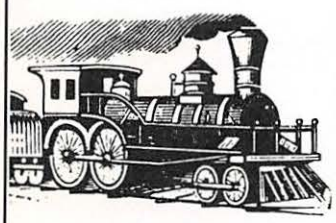
A Mo-Pac Tip Sheet: Who to put your distribution money on.

You're looking for a good bet for your distribution dollar. We have it for you. Mo-Pac. A total distribution system that provides 17 vital shipper services to move your goods any way, anywhere, anytime you need to. And makes it possible, in most cases, for you to do all your business with one carrier: us.



The Mo-Pac System:
More than 12,000 miles of railroad and 18,000 miles of truck routes over a 12-state territory. Distribution capability to virtually anywhere across the nation, around the world.

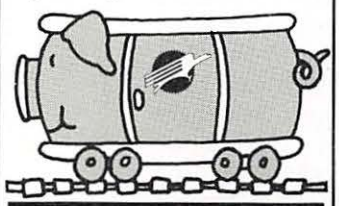
Trains:



More than 400 daily. Fast trains like the six-train Eagle Piggyback Fleet, or the Chemical Special. Run-through trains that by-pass terminals. Pre-blocking to save switching time.

Cars:
Nearly 60,000 in the fleet. Many capable of handling special commodities. Many equipped with cushioning devices. 97% of all cars in "go" condition. Average age of cars: less than 14 years.

Piggyback:
All six standard piggyback plans. With 75 ramps around the country and continuously expanding facilities.



Containerpak:
Mo-Pac's own containerization program. Four special plans. To make containerization work for you one way or another.

LTL/LCL:
It's important to you. It's important to Mo-Pac. Our comprehensive Scatback program gives the small shipment the special attention it deserves.

Modern Yards:
At key points in the Midwest, South and Southwest, including our new Centennial Yard in Ft. Worth, Texas.

Interchange Agreements:
With more than 400 motor common carriers. To move your goods anywhere.

Container Interchanges:
Complete agreements between Mo-Pac, water carriers and other railroads.

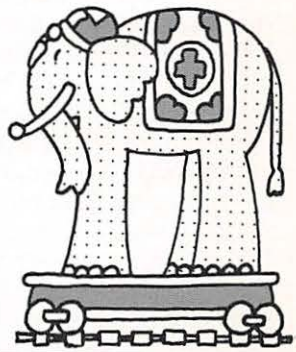
Split Delivery & Reforwarding Rates:
Full carloads can be broken down into smaller lots to move as LTL/LCL. And as interstate commerce.

International Shipping Expertise:
Direct to 11 Gulf ports, three gateways to Mexico. Interline service to all major U.S. ports. Offices in Japan, Mexico and Canada.

Container Stuffing and Stripping:
Loading and unloading through our truck lines at Dallas, Memphis, St. Louis, Kansas City and other key points. With local delivery or reforwarding.

Trap Car:
Moving LTL shipments to one consignee and destination. Or to an on-line terminal for segregation locally and beyond.

Bulk and Volume:
Regularly scheduled movements from point of origin to a fixed location. Special variations for one-time and seasonal movements. With incentive and volume rates in the bargain.



Contract Drayage:
Pick-up and delivery service through our truck lines at either origin or destination.

Hostling:
Complete intra-plant movement of trailers and containers at all major on-line points.

Chassis Leasing:
For a single trip, a day or a month. Whatever you require can be arranged through our truck lines.

Air Freight Forwarding:
Working directly with all major airlines. With pre-booking. Dock-to-dock handling. Surface forwarding rights for handling air freight between any city we serve and the airport city. And "single carrier responsibility": one waybill does is all, because one carrier does it all. Us.

Put your money and your goods on Mo-Pac. We say we "haul all." And we do a better job of it. That makes us the closest thing you've got to a sure thing.

mo-pac

Missouri Pacific Railroad
Texas & Pacific Railway
Chicago & Eastern Illinois R.R.
Missouri Pacific Truck Lines
Texas & Pacific Motor Transport

Watching Washington

R.M.M. McCONNELL

UNCLE SAM IN THE DRIVER'S SEAT?

The vision of Uncle Sam trading his striped stovepipe for the more somberly striped cap of a locomotive engineer provided much of the impetus for Congressional action on the Regional Rail Reorganization Act of 1973. Nobody wanted to see the Federal government going roadbed and roundhouse into the railroad business, so a lot of people sacrificed some smaller interests for the sake of keeping bankrupt railroads out of the hands of Uncle Sam.

Of course, all of this sacrifice meant that nobody was entirely happy with the result; and it has been increasingly evident that over the past few months everybody's happiness level has been going down. To focus on the Penn Central, where unhappiness is epidemic, creditors and stockholders have rejected the Reorganization Act's financial provisions: track maintenance and service costs have escalated far beyond what the Act was designed to cope with; derailments—2,149 of them in the first four months of 1974—and their consequent safety threats have made labor very nervous; and shippers are getting increasingly uneasy over relying on the ailing PC for deliveries. At the same time, several groups have launched court attacks on the constitutionality of the Act itself. If these are successful, then it will go out the window regardless of its practical benefits.

This leaves few viable options for those who believe that maintenance of rail service—especially rail freight service—in the Northeast and Midwest is essential to the nation's economy. One proposal would have a consortium of shippers finance a takeover of the ailing railroads. This has the advantages of keeping the system in private hands as well as of making those who would most benefit from a viable system pay the bills for it. But from a practical standpoint, it is common knowledge that the troubled roads are nobody's idea of a bargain, and capitalists don't like to buy losers. Another proposal calls for a very limited government-run railroad network that would operate the most troubled sections of the roads but leave the most viable sections in private hands. From a political standpoint, this has little to recommend it. Congressional conservatives are not likely to go for funding what promises to be a permanent financial liability. Liberals likewise will see little merit in saddling the taxpayers with the loser and letting big business ride off with the winner.

THE ICC'S EMERGENCY PLAN

At least one voice prominent in designing the Regional Rail Reorganization Act of 1973 has now gone on record as saying that nationalization is a possibility. Congressman Dick Shoup (R.-Mont.) told a seminar here that if the 1973 Act is found unconstitutional, "we'll see nationalization of the railroads." In the meantime, the Interstate Commerce Commission is making plans to keep railroad service in the Northeast even if the railroads themselves grind to a halt. ICC officials are outlining powers that would allow the Commission to order one railroad to operate trains over a failed road's lines. While this is obviously only a temporary expedient, it lends itself to being viewed as a forerunner of nationalization.

After all, if Uncle Sam is going to give the orders, it won't be long before the railroads opt to let him pay the bills as well.

Why
for a

Servo is the world's leading producer of electronic hot box detector systems.

We're not experts in every phase of railroad safety — but as the industry's pioneer designer and producer of electronic hot box detection systems, we can claim a high level of successful experience in working on the problems of bearing failures, axle burn-offs and derailments associated with undetected hot boxes.

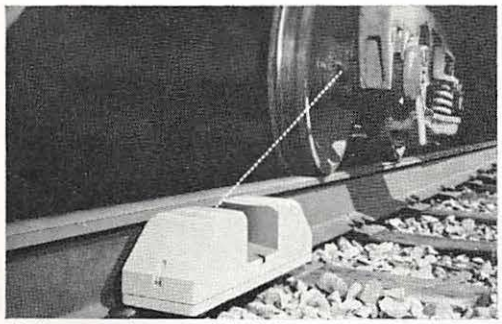
Since 1957, more than 1,800 SERVOSAFE Hot Box Detective Systems have been put into service, and have compiled an unequaled record of safety improvement, more efficient preventive maintenance procedures and cost reduction.

Hot box detectors available from Servo offer the widest flexibility in choice of system configuration, features and functional options, including: rail-mounted or ballast-mounted scanner; a complete selection of ancillary and test equipment; solid-state electronic signal processing. Several modes of data read-out are also available — automatic digital read-out at trackside or remote location; pen-paper recorder chart for visual interpretation; FM carrier data transmission over unlimited distances.

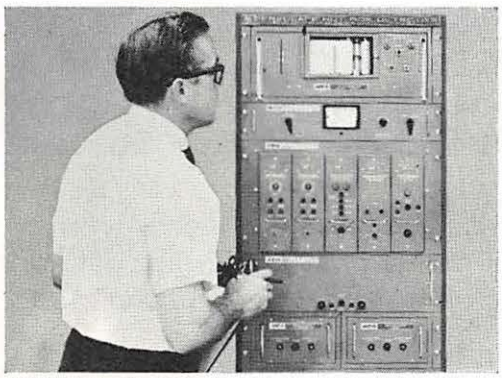
With our broad range of products and world-traveling network of field engineers, we can readily "customize" the design, manufacture, installation and operation of a SERVOSAFE System to best meet the particular requirements of your railroad.

You are invited to contact us for complete descriptive literature, or to arrange a field engineering site survey and application review — without obligation, of course.

spend the capital SERVOSAFE® system?

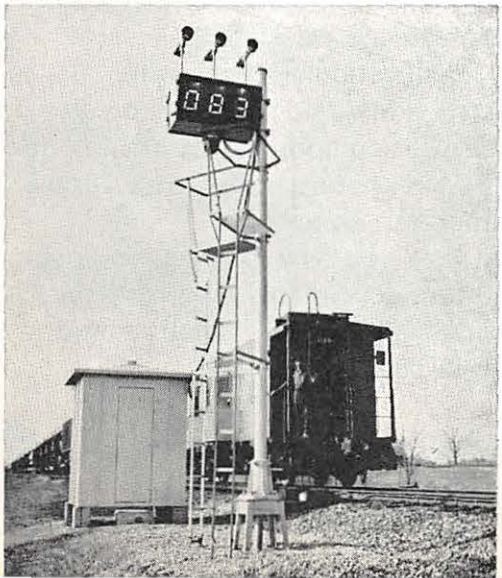


Rail-mounted scanner "looks" at and measures the heat radiated by passing journal boxes.



Solid state electronic data processing equipment, with permanent record chart recorder.

Trackside display board gives digital read-out of hot box location.



BECAUSE SERVOSAFE CAN REDUCE MAINTENANCE COSTS. Journal box and wheel set maintenance represent substantial costs each year. Part of these costs is due to normal bearing wear as cars age. Much higher costs, however, are involved when equipment is needlessly damaged by continued operation after lubrication has failed—causing major salvage jobs or replacement of wheel sets.

Where SERVOSAFE Systems are used for early detection, experience has shown that only 1 out of 10 hot boxes required a wheel set replacement. With other methods, as many as 9 out of 10 that came in for repair required new wheel sets.

BECAUSE SERVOSAFE CAN REDUCE LABOR COSTS. With SERVOSAFE providing an automatic and more precise method of inspecting journal boxes, railroads have been able to significantly reduce the number of personnel formerly required for manual and visual inspection of wheel journal boxes.

BECAUSE SERVOSAFE CAN MORE THAN PAY FOR ITSELF. Obviously, the single most important reason to make a capital investment in SERVOSAFE is to decrease the fearsome prospect of one of the greatest capital losses a railroad faces: a derailment caused by a bearing failure. The total cost of a derailment cannot be determined in advance, but it is not unrealistic to estimate that one serious derailment could cost a railroad more than 20 times the investment in a SERVOSAFE System. That's why most railroads agree that SERVOSAFE protection isn't costly—*lack of it is!*

servo

SERVO CORPORATION OF AMERICA

Hicksville, New York 11802
Phone 516-938-9700 • Cable SERVOGRAM
Lausanne, Switzerland
Phone (021) 29-98-73 • Telex 24 420 SERVO CH

Serving Safety Through Science

MEMBER RPI

Circle 6 on Reader Service Card

GRS systems conserve fuel, improve efficiency, reduce wastage.

Chances are, you're using up more energy, land, and effort than you have to. In this age where even time is running short, it may be more than you can afford.

GRS computerized Traffic Control Systems attain greater flexibility on single-track and double-track with corresponding increase in efficiency compared to ordinary block signaling, greatly reducing fuel-wasting stops, slowdowns, and delays.

GRS Car Classification Systems help you conserve fuel with fewer starts, slowdowns, and stops during humping. And with computer-controlled coupling speeds, you'll also save wear and tear on your goods, your rolling stock, and your shippers.

We want to help you control wastage as you move freight faster, more dependably. We have the capabilities to do it for big yards and small . . . and along the main track in between.

Traffic Master II color video control module for efficient, computer control of mainlines and interlockings.

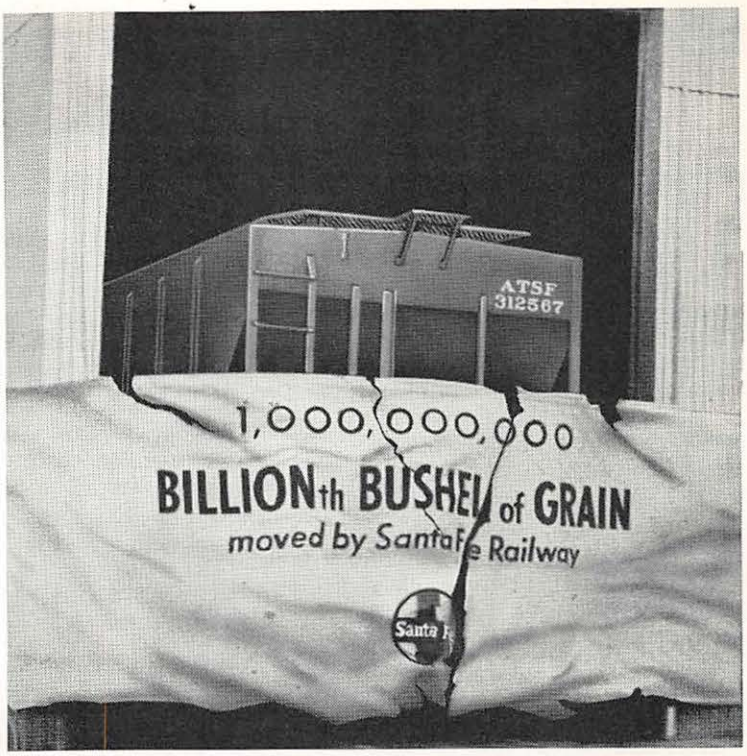
GENERAL RAILWAY SIGNAL

A UNIT OF GENERAL SIGNAL

ROCHESTER NEW YORK 14602

Circle 3 on Reader Service Card

Moving a BILLION of anything is a big job



The BILLIONTH BUSHEL was moved on March 20, 1974, and car 312567 at the FAR-MAR-CO elevator, Hutchinson, Kansas, broke the banner symbolizing this event.

A new Santa Fe record: **Moving a BILLION bushels of grain** in 20 months

Big moves are not unusual on the Santa Fe. Citrus, potash, coal, sulphur and various manufactured products move by the trainloads. But grain tops them all, especially wheat.

This year marks the one hundredth anniversary of Turkey Red Wheat in the United States. Through the efforts of the Santa Fe back in 1874, the Mennonites emigrated from Russia and brought with them a few sacks of their wheat. It thrived in the Midwest and parts of the Southwest to develop that area into the breadbasket of the world.

The past twenty months have been the most strenuous period in Santa Fe's one hundred year history of moving grain. A billion bushels have been handled since the heavy movement associated with the sale of grain for export, and the bumper harvests began in July, 1972. Within this period of time, Santa Fe has moved over 350,000 carloads of grain.

While moving grain is a top job, Santa Fe is busy with an equally important project of moving fertilizer to nurture the new wheat crop, for the success of this year's harvest will offset concerns about a wheat shortage.

Keeping ready for big moves is not easy. The Santa Fe freight fleet of 78,000 cars includes 16,000 covered hoppers, 12,000 of them jumbo 100-ton cars, which are ideal for moving grains, potash and other bulk commodities. Big moves also require modern diesel power, automated yards and skillful people to get the job done. All of this is now at work as Santa Fe continues at a record pace moving billions of the many things needed and used every day by the people of our nation.

"To give recognition to the movement of the BILLIONTH BUSHEL of grain over the Santa Fe in a twenty-month period, Miss Kansas Wheat joined me at Hutchinson, Kansas, March 20, 1974.

When this record grain movement started in mid-1972, many predicted the rail industry would not be able to handle the job. Despite no advance warning and severe problems of port congestion that hampered the handling of cars with export wheat, Santa Fe and many other railroads have set records of moving grain while keeping other traffic rolling.

This great transportation job was accomplished by skillful, dedicated Santa Fe people, and through the wonderful cooperation of all shippers.

Grain continues to move in a big way and a bumper crop is expected at harvest time. That is why we are now hard at work planning ways to apply Santa Fe facilities and resources to move increasing volumes of traffic this year without serious car shortage."

John S. Reed
Chairman and
Chief Executive Officer

THE ATCHISON, TOPEKA AND
SANTA FE RAILWAY
A SANTA FE INDUSTRIES COMPANY

Santa Fe

BN completing major microwave link

In August Burlington Northern will be completing a major expansion of its microwave communications network at a cost of over $10 million. Payoff on this investment is estimated to be under ten years. When the link between Great Falls, Mont., and Spokane, Wash., goes into operation, BN says the resulting $22.5-million, 4,582-mile network will be the world's largest and longest privately owned microwave system of its kind. It would have the capacity for 600 simultaneous transmissions in either direction, according to T.W. Wigton, director of BN's Communications Division.

In conjunction with wire circuits along BN's 25,000 miles of railroad, microwave gives a substantially expanded medium for voice, data and teleprinter transmission. BN uses this versatile system for monitoring the freight cars on its line in conjunction with the computer center at its St. Paul, Minn., headquarters. It is the core of a direct-dial telephone system that extends from Chicago to Seattle.

● **Existing systems.** BN's merger in 1970 found the new railway with two substantial microwave segments already in operation. Between 1965 and 1967, the former Burlington had established its microwave system between Chicago and Lincoln, Neb. Simultaneously, the Northern Pacific had been making an installation (not completed until 1969) between St. Paul and its western terminals at Seattle and Portland, Ore.

Since the merged system concentrates its through freight traffic on the easier grades of the more northerly of its two mainlines, that through Minot, N.D., the importance of increased communication capabilities along this route were immediately apparent to BN management. It was also desirable that the existing segments be integrated with each other and with the planned extension along the former Great Northern line.

Soon after the merger, in cooperation with Collins Radio which had supplied the equipment for both the CB&Q and NP systems, BN undertook a four-phase program of microwave expansion:

—**Phase 1.** Mendotta, Ill., to St. Paul, which was completed in June 1972 and served to tie the two existing segments together.

—**Phase 2.** St. Paul to Fargo, N.D., which went into operation early in 1973 and provided a second "backbone" link along the former GN mainline.

—**Phase 3.** Fargo to Havre, Mont., that opened at the end of March.

—**Phase 4.** Havre to Spokane, Wash., which is now under construction and will be completed in August with the segment to Great Falls, Mont., opening first.

The section now being built across mountainous western Montana presented some problems in securing tower sites. The route along the crest of the Rockies involved clearance for sites deep within the Bob Marshall National Wilderness Area and BN ran into opposition from environmentalists.

● **211 terminals.** The dozen sites finally established in this region presented some substantial construction problems. When they are all complete late this summer, there will be a total of 211 terminal and repeater stations along BN's 4,582-mile system. Tallest of the towers is that 410 feet high just east of Fargo. Others range in height up to 320 feet.

While BN has two different rail routes between Spokane and Seattle, the original 1969 microwave installation along the southerly (formerly NP) route has sufficient capacity so that it was not necessary to provide a second link along the Wenatchee-Everett line. BN's microwave capabilities actually extend beyond its own terminals. BN exchanges microwave channels with Southern Pacific south of Portland, reaching southern Oregon and San Francisco. There is similar exchange with Union Pacific to complete BN on to Denver from Omaha.

BN's system is designed to be fully redundant, offering protection against outages under almost any conceivable condition. There is provision for transmitting all manner of fault indications to supervisory locations on the routes. Stations have battery and standby engine protection. While the installations made in the Sixties were of Collins 308D equipment which incorporates some vacuum-tube circuitry, the Mendotta-Spokane line is the solid-state 318D equipment that assures an added degree of reliability.

● **Train radio coverage.** While BN is retaining its mainline pole lines for dispatcher circuits, CTC controls and signal power, it has been relocating the VHF antennas for its train radio system on many of the microwave towers to increase the coverage. In some instances the dispatcher keys CRC radio facilities via microwave channels to distant locations. All told, BN has nearly 8,000 two-way radios for train communications.

Brinegar: Amtrak is being "politicized"

There are those who see Amtrak as one of the great success stories of the energy crisis. Transportation Secretary Claude S. Brinegar is not one of them. Brinegar, an economist by profession, sees Amtrak as a dollars-and-cents drain on the unwary taxpayer, and the expensive plaything of politicians who know more about vote-getting than they do about transportation economics.

In a National Transportation Week address at Washington's National Press Club May 14, Brinegar had this to say:

"Since Amtrak was conceived of as a for-profit operation—in fact, its common stock is owned by three railroads—this implies to me that it was intended to provide this service in markets where it makes reasonable economic sense. But Congress has—and is—pushing Amtrak in other directions, mostly political. We are now prohibited from changing the present route structure—even though some of the long-haul routes have very little ridership—and we are required to add a new 'experimental' route this year and next.

"When it started up a little over three years ago, Amtrak inherited some 2,000 largely worn-out passenger cars and, even today, it has to rely on the railroads to both operate its trains and to repair and maintain its equipment. And, of course, last winter's gasoline shortage suddenly threw Amtrak a great surge of business it was ill-prepared to handle.

"Needless to say, these events have not been conductive to peace and harmony. They are also producing a very serious cash loss—that is being financed, I suspect unknowingly, by the general taxpayer. Despite a 30% increase in this year's ridership, Amtrak's revenues of about $240 million will be offset by expenses of nearly $400 million, for an operating loss of about $160 million. In addition, the Federal government has guaranteed $300 million in Amtrak loans to purchase new equipment, and will likely soon guarantee another $200 or so million."

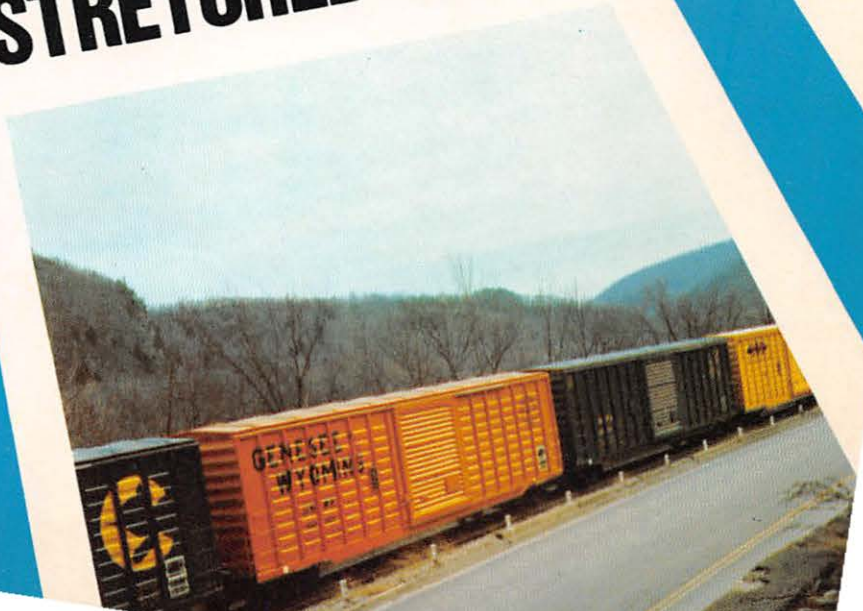
The real problem, as Brinegar sees it, is that "Amtrak is trying to provide cross-country service in competition with our fine air and intercity bus service. The economics are simply wrong. Amtrak should specialize in what it's good at, and stop trying to do too much." What Amtrak may be good at, in the Secretary's view, is moving people in densely populated corridors.

Brinegar defended the record of Amtrak President Roger Lewis, declaring, "He's working very hard to make the most of a difficult situation."

HERE
COMES

BERWICK

NEW CARS
REBUILT CARS
UNDERFRAMES
STRETCHED CARS



Berwick Builds Cars for Large Railroads and Small

At Berwick, smaller railroads enjoy the same quality of product and service as do the nation's largest carriers. Shown on the move near Berwick, Pa., are these recently-built 50′-6″ 70-ton box cars:

(a) one of 1,000 for The Chessie System, (b) one of 100 for Maryland & Pennsylvania Railroad, subsidiary of Emons Industries, (c) one of 25 for The Buncher Co., on lease to Roscoe, Snyder & Pacific Railway Co., and (d) one of 5 for Genesee & Wyoming Railroad.

You don't have to be a Class I Railroad to get class one treatment from Berwick. Whether large or small, your box car business is important at Berwick.

BERWICK

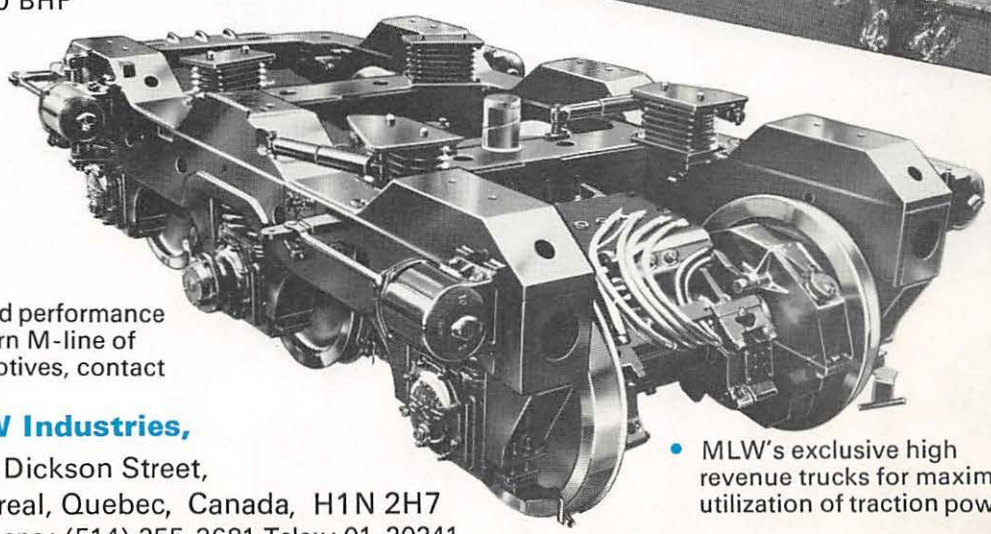
MEMBER RPI RAILWAY PROGRESS INSTITUTE

Post Office Box 188 • West Ninth Street • Berwick, Pa. 18603 • Phone 717-752-2784

MLW motive power for today

MLW's modern locomotives do more work on less fuel with these unique power train features.

- The world-renowned 4-cycle turbocharged Model 251 diesel engine — recognized for fuel economy throughout its 1050 BHP to 4500 BHP power range.



- MLW's exclusive high revenue trucks for maximum utilization of traction power.

For full specifications and performance records of MLW's modern M-line of road and transfer locomotives, contact

MLW Industries,
1505 Dickson Street,
Montreal, Quebec, Canada, H1N 2H7
Telephone: (514) 255-3681 Telex: 01-20241
Cable: MONLOCO

Circle 8 on Reader Service Card

The car that's engineered to take it. Inside and out.

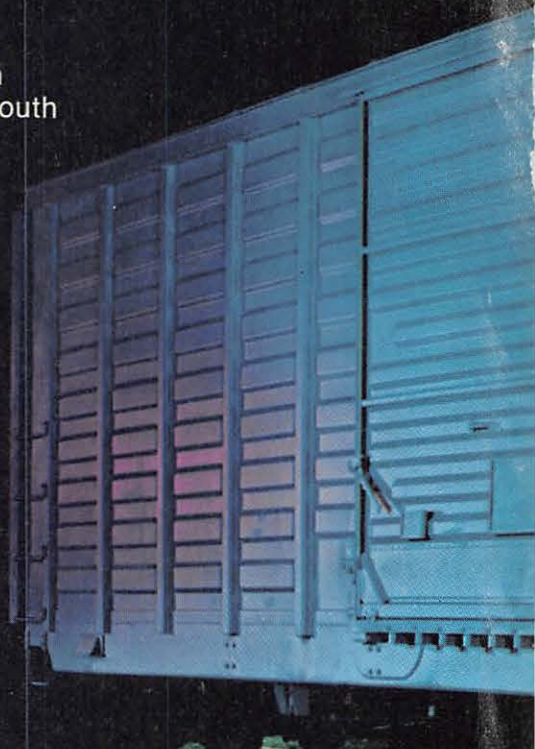
Not only is the new Pullman-Standard box car engineered for strength, it is designed for versatility. The inside can be fitted to carry almost anything your customers want to ship.

For instance, you can have it lined or unlined—with recessed lading anchors of almost any type—with bulkheads or side wall filiers—with bolt-on or recessed belt rails—with smooth sides or waffle sides.

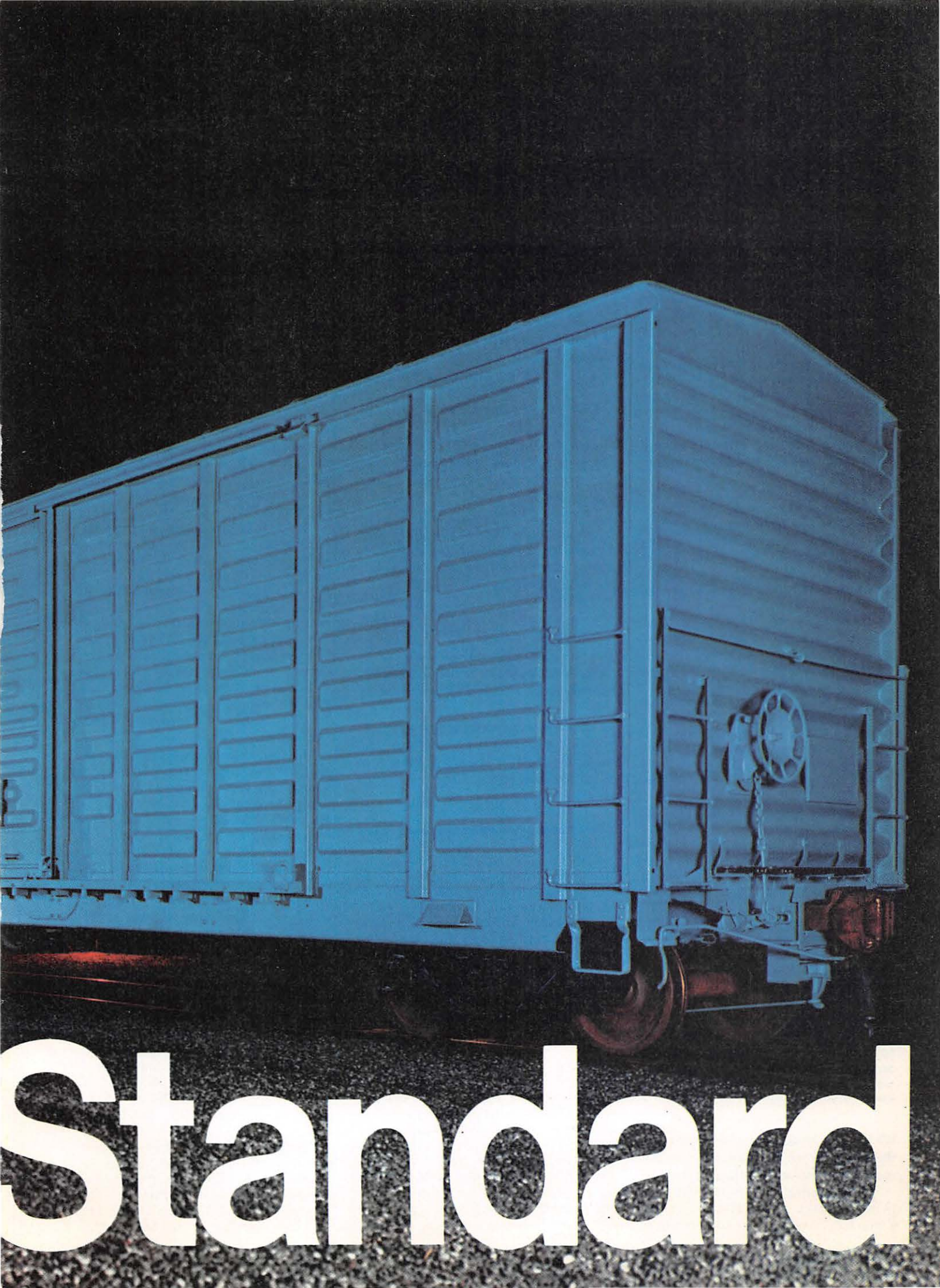
And you can have it in 40, 50 or 60 foot car lengths.

Only the strength is standard in the new family of Pullman-Standard box cars. Its uses are broader than ever.

Pullman-Standard, a division of Pullman Incorporated, 200 South Michigan Avenue, Chicago, Illinois 60604.



Pullman-S


Standard

FREIGHT TRAFFIC POLL:

Shippers see railroads drifting toward nationalization

W. L. Weart, traffic manager of Continental Can's Tee-Pak subsidiary in Chicago, relies heavily on railroads to get his company's products from production line to customer—and right now he's a worried man. "I'm very deeply concerned," says Weart, "that we are going down a road of creeping nationalization of our railroads."

Three out of four of 60 major shippers polled by Railway Age early in May share Weart's apprehensions. They see railroads drifting toward partial or full nationalization—and they don't like what they see.

Many are increasingly fearful that government ownership and operation of a large part of Northeastern lines will be the ultimate outcome of the present mess—but only 11 out of the 60 feel that nationalization of part of the system won't eventually spread to the rest of it.

To the question, "Under what conditions would you find government ownership preferable to private ownership?", most replied with a simple "None." As Cliff Ellenwood of the American Plywood Association, Tacoma, Wash., put it: "A look at Amtrak and the Postal Service should be enough to convince anyone that nationalization won't work."

An exasperated handful of shippers share the attitude expressed bluntly by W.W. Turner of Reynolds Metals, Sheffield, Ala.: "If rail service and supply of equipment gets much worse we might welcome any change." Or R.J. Breitinger of Westinghouse Electric, Pittsburgh: "If the *only* alternative to a Penn Central operating as it is today is a government-owned railroad, then that would be preferable."

Can nationalization still be averted—and if so, how? Replies to these questions range from the shrewd to the simplistic. While falling far short of suggesting any new "solutions," they do strikingly reveal the attitudes that some of the industry's biggest customers hold with respect to present-day railroad managers. A sampling of comments follows.

What can railroad managements do, that they are not now doing, to keep railroads privately owned and operated?

"Stop waiting for governmental assistance. Healthy railroads must aggressively act to acquire potentially profitable lines of bankrupt carriers."—Brian Holtz, traffic manager-operations, Jos. Schlitz Brewing Co., Milwaukee.

"Approach problems on a cooperative basis, putting individual carrier interests secondary."—Arthur C. Roy, general manager-traffic, Pennsylvania Glass Sand Corp., Pittsburgh.

"Get more competent managers in top positions."—L.J. Souren, director of traffic, Kennecott Copper Corp., New York.

"Merge weak Eastern railroads with financially sound Southern and/or Western roads to form complete railroad systems. Continuing the fragmentation of railroads into Eastern, Southern and Western lines no longer makes any sense. Instead of the partial proposed solution to the Northeast crisis, involving massive financial aid from the Federal government, there should be four or five national railroad systems—a blending of many components."—Harry Menaker, general distribution manager, American Home Foods, New York.

"They must use every device available to them to increase the profitability of their properties. For example, one area that seems to have much room for improvement by even some of the so-called profitable roads is a better control over cash flow. Many instances of greatly delayed billings, not only for freight charges but for other services such as property lease payments, for demurrage, etc., are obvious to the user."—R.H. Heilman, corporate director of transportation and distribution, A.O. Smith Corp., Milwaukee.

"1. A massive austerity program. Stop spending money except on absolutely essential items. 2. An honest attempt to iron out old 'work rules' which are costing the railroads millions of dollars annually. They must lay the cards on the table—explain *why* changes are desperately needed. 3. Closer supervision of hourly personnel to eliminate wasteful practices. 4. Closer supervision of loss and damage claims with the objective of claim prevention."—Dana Throckmorton, traffic manager, Federal Warehouse Co., Peoria, Ill.

"I feel management spokesmen, whether they be for transportation or industry, are poorly prepared when they make presentations before Congress, regulatory bodies, etc. All too often their remarks are prejudiced toward just their single idea and lack broadness. They understand their business but they do not get their message across to others."—J. Robert Morton, vice president corporate transportation, Combustion Engineering Inc., Stamford, Conn.

"Get cars with Federal help. Without cars, no railroad can get or be healthy. Railroad management fiddles while Rome burns."—Fred H. Tolan, Pacific Northwest Traffic League, Seattle.

"Make more intense efforts to negotiate with unions to minimize 'make work' practices."—Allen K. Penttila, corporate director of traffic and distribution, Evans Products Co., Des Plaines, Ill.

"They should tend to their own shop instead of worrying about 'far-out' investments."—L. Clabaugh, manager of transportation, W.R. Grace & Co. Davison Chemical Division, Baltimore.

"Eliminate lines or branches which

Railway Age asked 60 shippers:

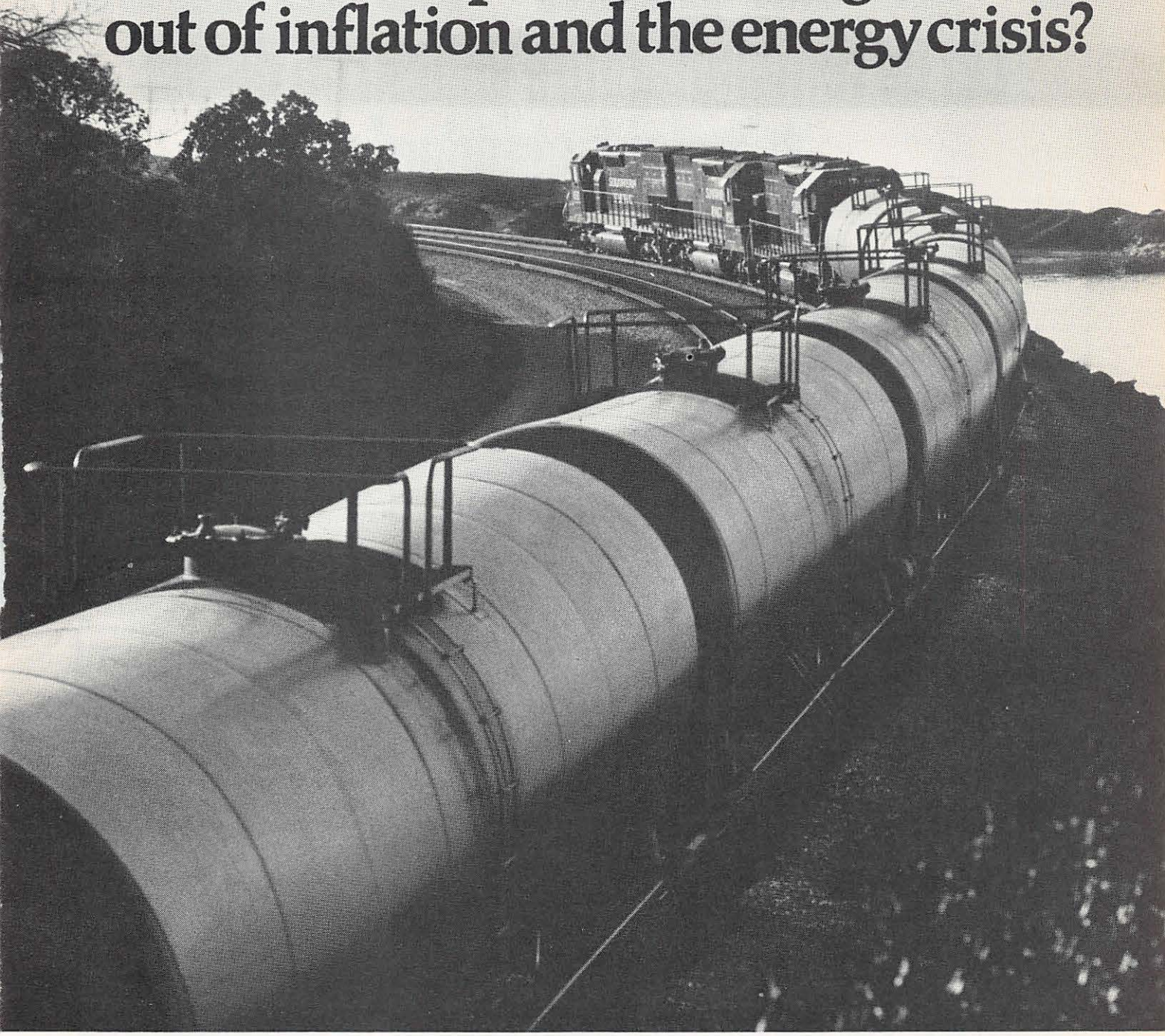
1. In light of recent events, do you discern:
   a. A drift toward total rail nationalization? **18%**
   b. A move toward partial nationalization? **57%**
   c. A reaffirmation of the determination of all concerned to keep railroads privately owned and operated? **25%**

2. Do you think it would be feasible to nationalize one segment of the industry and at the same time keep other segments in private hands?
   Yes 9% **No 91%**

3. To keep railroads privately owned and operated, what do you think can be done, that is not now being done by: Management? The Federal government?

4. Under what conditions, if any, would you find government ownership of railroads, in whole or in part, preferable to private ownership?
(For replies to 3 and 4, see text.)

What's Southern Pacific doing to help take the sting out of inflation and the energy crisis?



We're helping hold down inflation by providing shippers the most economical way to ship freight throughout the nation. To help increase our efficiency and reduce our customers' shipping costs even further, we've also developed money-saving unit train operations, not only for crude oil, as is shown in the above picture, but for iron ore, steel, coal, autos and auto parts, and perishables. And we're urging shippers to load cars to full capacity to take advantage of incentive rates as well.

In the last 5 years we put over 25,000 new freight cars and over 700 locomotives in service. And spent millions more to increase the efficiency of our terminals and general railroad operations. Almost a billion dollars in capital expenditures on our railroad alone. No other railroad can match that. And this year we're investing another $150 million in new rolling stock and millions more for improvements to make our railroad even better.

Our trains produce 238 ton-miles of transportation per gallon—4 times more than highway transportation, 125 times more than air. We're highly efficient users of energy. And we're doing even more to improve the inherent fuel efficiency of rail transportation. Our programs such as computer simulated operations for our freight trains, special modifications to our diesel locomotives and careful policing of our fueling techniques are producing even greater economies in the use of energy. And by piggybacking thousands of containers and highway trailers we're making the fuel available for transportation go even further.

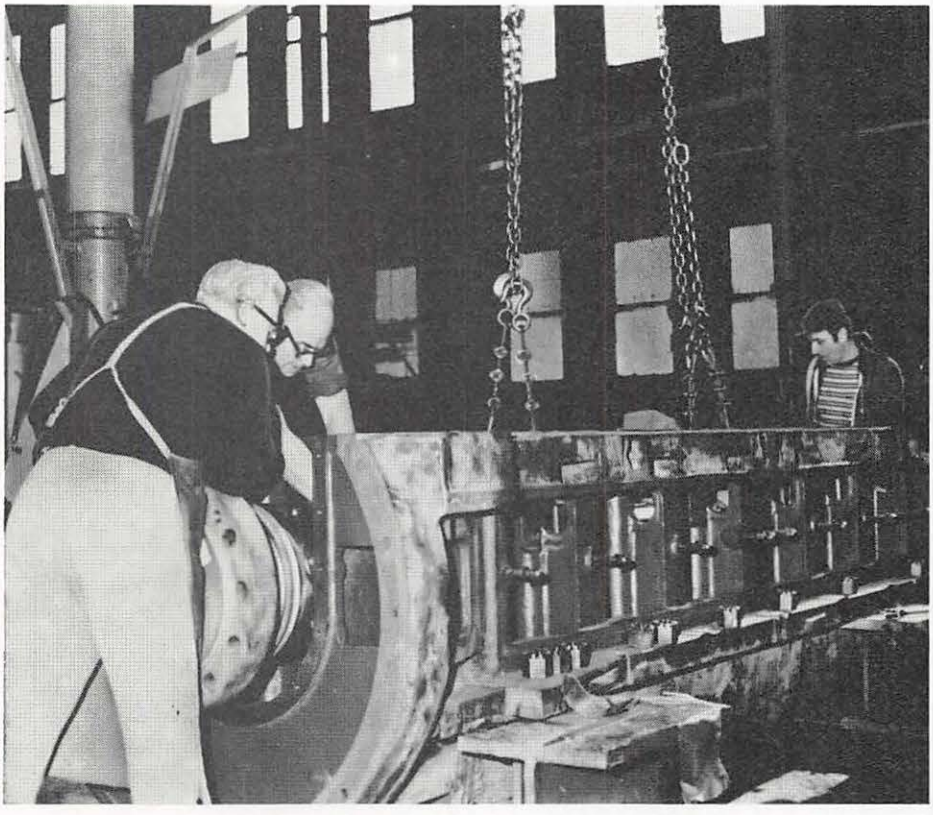
We do everything we can to conserve energy and fight inflation. We have the transportation plant—and the people—to do the job. And we're doing it.

Southern Pacific.
We're making tracks for the future.

POWER BOSS™

Let us remanufacture your ALCO diesel to today's standards

- $ we'll upgrade it
- $ restore original tolerances
- $ install advanced components
- $ give it a new engine warranty

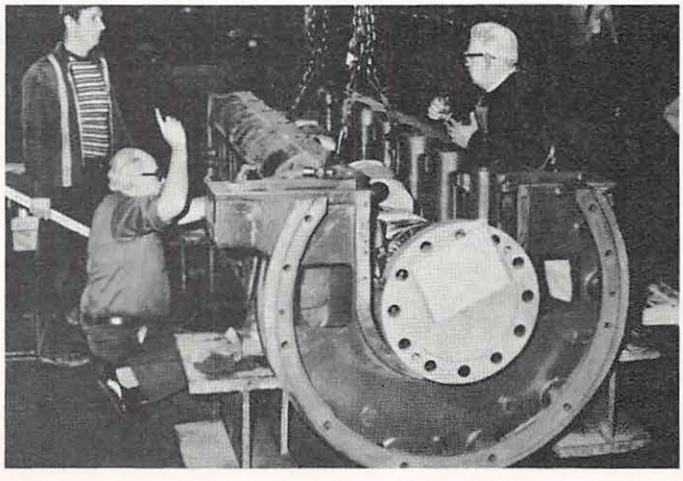


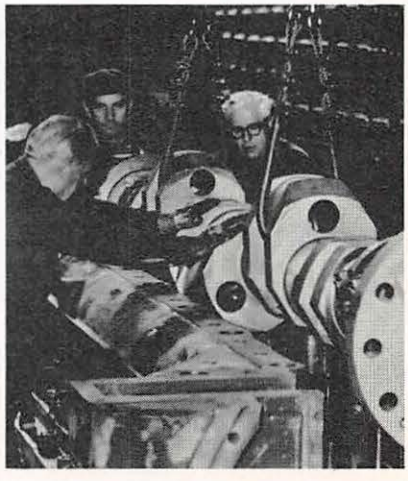
We're remanufacturing more old ALCO diesels for the same reasons we're installing more new ALCOs. We build just one basic engine, with a high degree of standardization. So, when we improve a component — whether it's a piston, bearing or entire fuel injection system — the same new component is right at home in an old ALCO. Constant improvement of standardized parts means reduced costs . . . reduced inventories . . . reduced shop time . . . increased availability. Capitalize on total diesel dependability . . . go ALCO Power Boss.

Contact your local ALCO representative. Alco Engines Division, Subsidiary of White Motor Corporation, Auburn, N. Y., 13021, U.S.A.

ALCO®

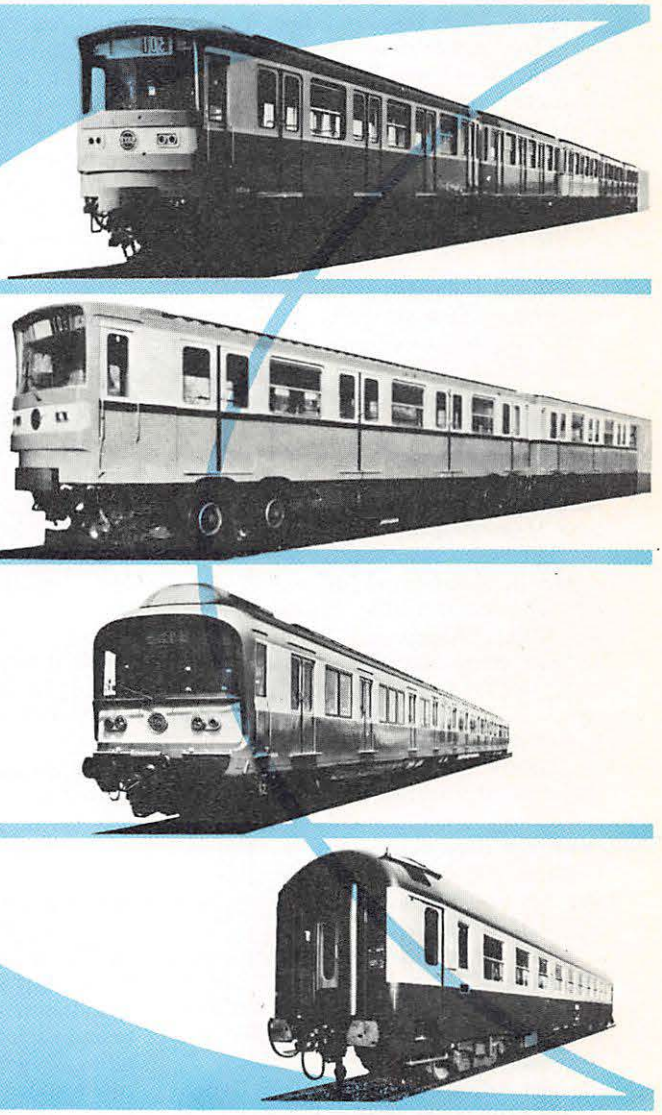
WHITE MOTOR CORPORATION





Circle 9 on Reader Service Card

Rolling stock



CIMT LORRAINE

WIDE RANGE OF ROLLING STOCK

TRAINSETS
PASSENGER COACHES
SUBWAY AND COMMUTER TRAINS
"KANGOUROU" WAGONS FOR TRANSPORT OF TRAILER TRUCKS
FREIGHTCARS WITH SLIDING ROOF (Patent CIMT - FOREST)

PRINCIPAL REFERENCES

RAILROADS :
S.N.C.F. - S.N.C.B. - F.S.
SUBWAYS :
PARIS - MONTREAL - MEXICO

Siège Social
42 Avenue Raymond Poincaré
75116 PARIS - FRANCE
Tel. 704 51 10
Télex : 61119 F

Usine
La Rhonelle
59770 MARLY-LES-VALENCIENNES - FRANCE
Tél. 46 65 40
Télex : 11803 F

ALFA Publicité PARIS - C.T.5

Circle 10 on Reader Service Card

Should solvent roads use their strength to bail out the bankrupts? Some shippers think so.

constitute a duplication of service."—E.M. Burk, traffic manager, Wyatt Division, U.S. Industries, Inc., Houston.

"Try having fewer chiefs and more Indians. Spend time on the railroads, and less on conglomerates."—E.S. Rosenzweig, general traffic manager, Longview Fibre Co., Longview, Wash.

"Clean dead timber personnel—operate like a business."—Lyman McLane, manager traffic and transportation, Campbell Taggart, Inc., Dallas.

"Make a serious study of means to improve management of resources."—J.P. Nellison, general traffic manager, American Standard, Inc., New Brunswick, N.J.

"Divest themselves of all unnecessary equipment and property and permit new efficient management to clear all debts and start over."—J.L. Miller, manager of traffic, Birdsboro Corp., Birdsboro, Pa.

"If possible, submit a plan to assume the bankrupt portion of Northeastern railroads."—F.E. Lawless, traffic manager, Masonite Corp., Chicago.

"Put heavy emphasis on private ownership in all areas of influence."—D.C. Smith, general traffic manager, Kraft Foods Co., Chicago.

"Pay more attention to user equipment needs and more consistent service."—J.D. Robins, director of traffic, Caterpillar Tractor Co., Peoria, Ill.

"Lobby more so as to bring to the attention of Congress the need for faster action on abandonment proceedings, some rate deregulation and less featherbedding."—R.G. McBride, manager-traffic, Amcar Division of ACF Industries, St. Charles, Mo.

"Operate on dependable schedules and eliminate so many delays."—August Heist, director of traffic and distribution, R.J. Reynolds Tobacco Co., Winston-Salem, N.C.

"Get rid of the deadwood."—George B. Weir, manager traffic, Standard Slag Co., Youngstown, Ohio.

"I feel the solvent roads must so to speak carry the Northeast roads until proper management, monies, equipment can bring them back."—E.P. Henry, manager traffic, Allis Chalmers Corp., Milwaukee.

"Adjust charges so that all traffic pays its share of the burden."—D.J. Osbjornson, director of distribution, Lamb-Weston Inc., Portland, Ore.

"They must straighten out their labor problem."—Henry M. Karel, director of distribution, Cleo Wrap Corp., Memphis.

"Compete! Compete! Compete!"—R.J. Breitinger, director of traffic and transportation, Westinghouse Electric, Pittsburgh.

"Show less concern with diversification and more with running their railroads."—Cliff Ellenwood, assistant director-special services, American Plywood Association, Tacoma, Wash.

"Return to a transportation service concept geared to the present century."—T.E. Nast, traffic manager, CF&I Steel Corp., Pueblo, Colo.

"Stop blaming the public and get some new and vigorous management."—W.E. Turner, district transportation manager, Reynolds Metals Co., Sheffield, Ala.

"More control should be given to knowledgeable railroad people, and less emphasis on building financial empires."—William A. Brown, general traffic manager, Abex Corp., New York.

"Get the message to Congress and the Administration that enough Federal money must be forthcoming to permit the bankrupts to continue operation until the Rail Reorganization Act can be implemented."—J.C. Howard, vice president, transportation, Bethlehem Steel Corp.

What can the Federal government do that it is not now doing to insure the continued private operation of railroads?

"It appears that the Rail Reorganization Act of 1973 (Public Law 93-236) will fail on account of diverse views by the carriers, shippers, ICC, DOT, and in future probably by USRA and Congress. The pressing need now is for immediate cash help from Congress to assist the carriers in rehabilitation of plant—then some help in trimming plant through abandonments, and subsidies by states or industries where needed, toward the ultimate goal of becoming financially responsible. More carriers could reach this point with present revenues, if they had monies to upgrade track, purchase equipment, etc."—Arthur C. Roy, Pennsylvania Glass Sand.

"Relax economic regulation. Permit easier abandonment of unprofitable branch lines. Guarantee loans to purchase equipment and improve right-of-way. Eliminate local taxation of right-of-way and related transportation facilities."—L.J. Souren, Kennecott Copper Corp.

"Many railroad properties are in such bad shape that massive amounts of money will be required to bring them back into condition favorable for today's traffic. It happens that the government is the only recourse at this point in time. Beyond financial aid, the government should speed up its procedures for abandonments, merger approvals and other actions requiring regulatory approval."—R.H. Heilman, A.O. Smith Corp.

"Beef up the ICC to do an adequate job of car, locomotive and track inspection and discontinue all state rate and safety regulations which conflict and are inadequate. If the railroads could stop dealing with 48 state regulatory agencies, a great deal of expense could be saved."—D.E. Andersen, general traffic manager, Penick & Ford, Cedar Rapids, Iowa.

"The Federal government must enact legislation to modify the ICC Act to provide procedures that permit easier rail abandonments and acquisitions of trackage by solvent railroads while preserving competition."—Brian Holtz, Jos. Schlitz Brewing Co.

"I am deeply concerned by a concerted effort on the part of government to get involved in business. Take the oil company investigations, the intrusions into transportation. The problem, as I see it, is that Congress is in a mood to want to take over. And Congressmen are reacting not to the men 'back home' but to their staffs. We must get through to our representatives in a forthright and truthful manner so that they know the real facts."—J. Robert Morton, Combustion Engineering.

"Subsidize a percentage of maintenance of way and equipment in a sufficient amount to assure the operation of the railroads during war or emergency."—J.L. Miller, Birdsboro Corp.

"Consider accepting offers from solvent lines to absorb the Penn Central, etc., in liquidation proceedings."—F.E. Lawless, Masonite Corp.

"Recognize the fact that other attempts to nationalize have not succeeded."—D.C. Smith, Kraft Foods Co.

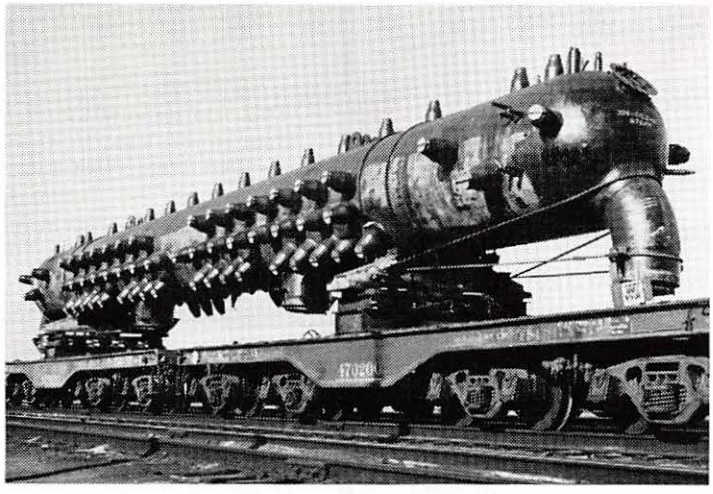
"Instead of naming new agencies and passing the buck, action should be taken to help the bankrupt roads."—E.P. Henry, Allis Chalmers Corp.

"Prevent diversification—all management effort as well as funds should be devoted to improved railroading."—R.J. Breitinger, Westinghouse Electric.

"Restrict diversification of railroad funds and personnel out of the transportation industry."—T.E. Nast, CF&I Steel.

"Agencies set up by the government should include railroad operating management people and not just political employees."—William A. Brown, Abex.

We can handle it.



the Union Pacific
railroad people

Contact your local Union Pacific Traffic Agent today.

UNION PACIFIC

PIGGYBACK

...The U.S. ENERGY SAVER

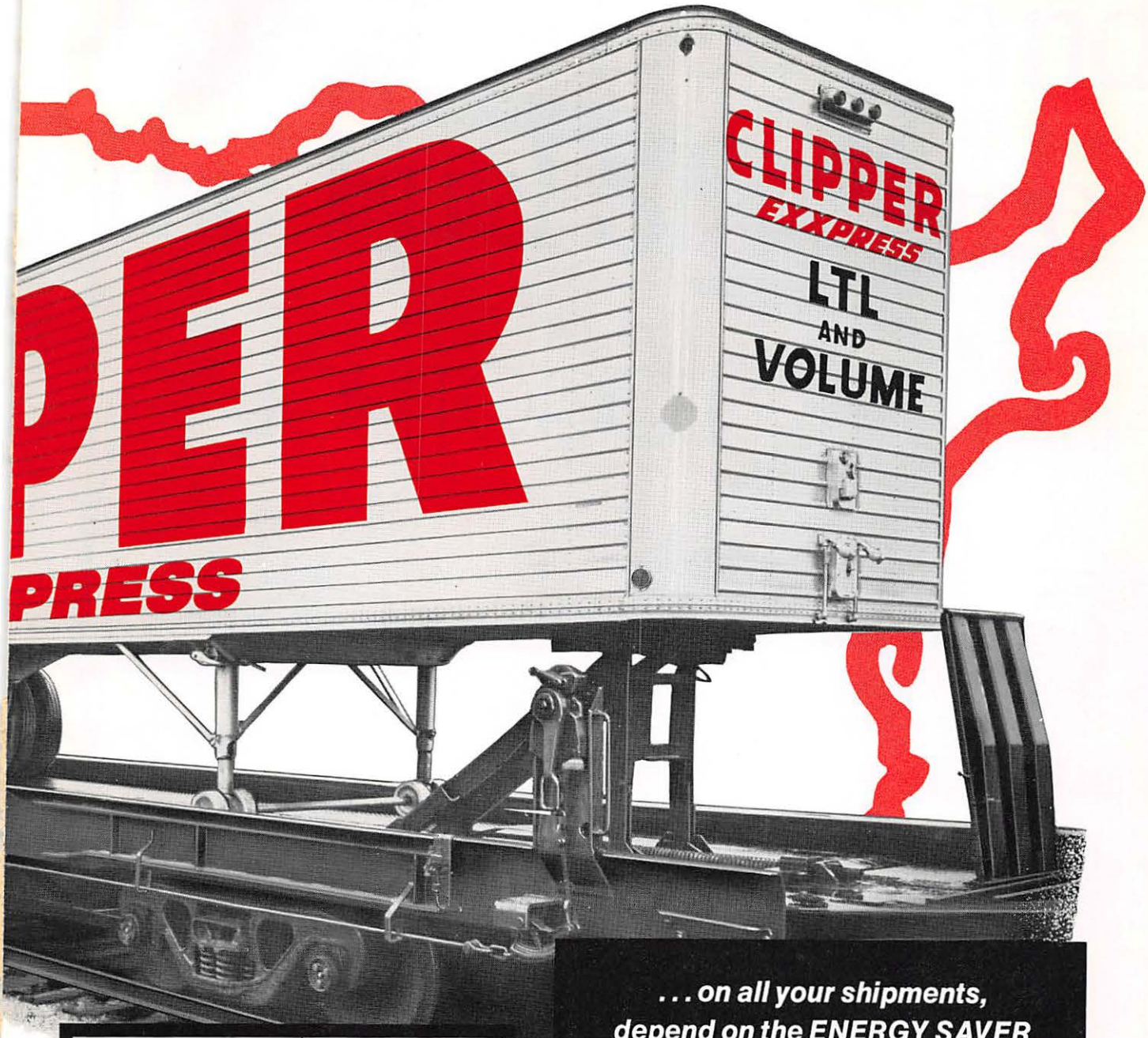
Route Clipper *Exxpress* and save energy on all your shipments— both LTL and Volume.

CLIPPER *EXXPRESS* Piggyback saves 76.1% of the critical energy consumed by highway carriers. A motor carrier uses 964 gallons of fuel on the average round trip between Chicago and San Francisco—4338 miles. The same amount of freight can be transported the same distance by piggyback using only 230 gallons of fuel. Savings per trip—734 gallons.

This 734 gallons saved means 250 thirty-mile round trips from home to the office for your Traffic Manager—*one whole year of fuel.* In the Traffic Manager's home, this same 734 gallons would take care of the annual heating needs of his 1500 sq. ft. house.

ENERGY SAVING FACT

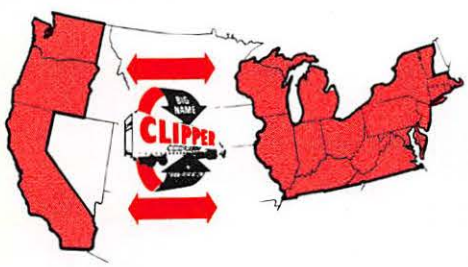
Diverting traffic to piggyback on a nationwide basis would save 403,000 barrels of oil *per day* according to a report to the Committee on Commerce, United States Senate. In moving freight, railroads are four times as efficient as trucks and sixty times as efficient as airplanes.



. . . on all your shipments,
depend on the ENERGY SAVER

CLIPPER
EXXPRESS Piggyback

3401 West Pershing Road, Chicago, Ill. 60632
CALL 312-376-7400
OFFICES AND TERMINALS IN MAJOR CITIES



DIRECT DAILY SERVICE

- ☆ From the Midwest and East to ALL points in California, Oregon, Washington, Alaska and Hawaii.
- ☆ From ALL points in California, Oregon and Washington to ALL points in the Midwest and East.

The Intelligent Choice Is Piggyback!

Circle 11 on Reader Service Card

To reduce friction with the ground—in flat areas, anyway—we could flood the streets and roads and float the load along

That's better than dragging the load along on the ground. But friction hasn't let go by any means!

Lift a stone out of water. Why is it wet? First, the water molecules in direct contact with the stone cling to it. Second, the next layer of molecules clings to the first. And so on. There is some sliding action between layers, of course, or nothing could move through water. But this clinging is a serious drag on hull movement.

In fact, wetted surface produces so much friction that designers of racing sailboats trim rudders and keels down to an absolute minimum.

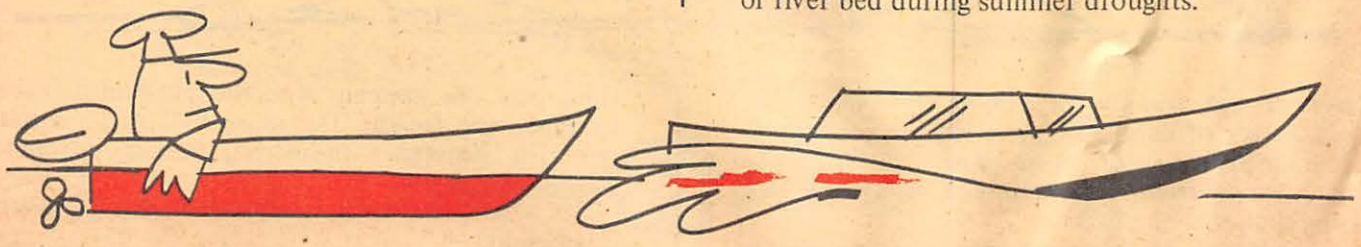
Then there is the matter of pushing the water out of the way to let the load through. Tons and tons of water. Watch enormously powerful tugs churn and struggle to inch a cruise ship along.

To get around pushing water out of the way, the V-bottomed planing hull has been developed. With enough power, you can push the load up on top of the water and *travel.*

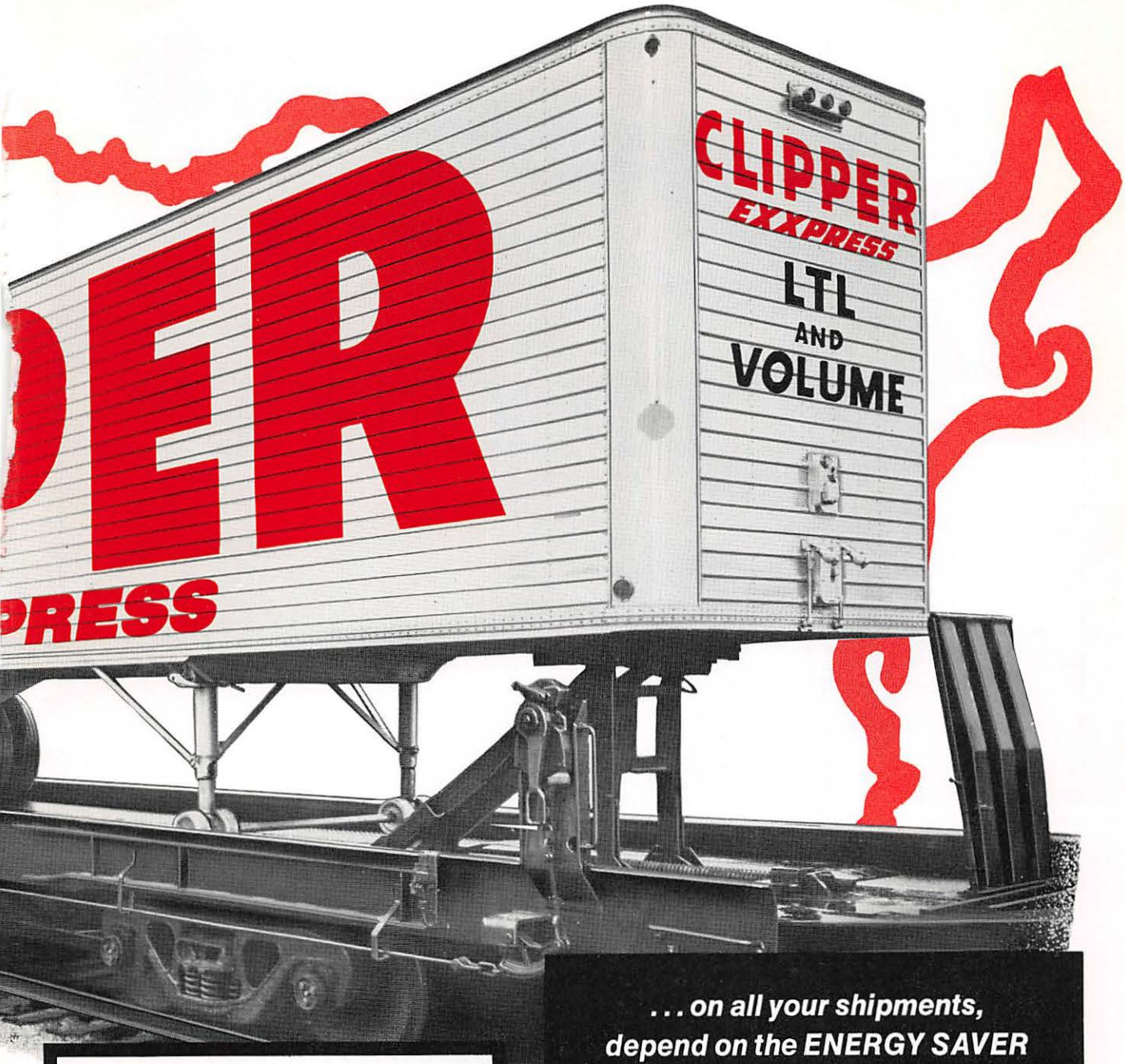
But there are enormous power losses at the propeller, which may be on the order of only 50 to 60% efficient. And skin friction becomes radically more restraining as speed increases.

Then there is wave forming. This imposes such great restraint on hull movement that it has been estimated that a new model Navy attack submarine can travel something like four times faster below the surface than on it. Submerged travel, however, poses a variety of perhaps insurmountable problems to commercial vessels.

Clinging water has the further disadvantage as a transportation medium that it can grab the hull in an icy grip in winter and lower it onto the canal or river bed during summer droughts.



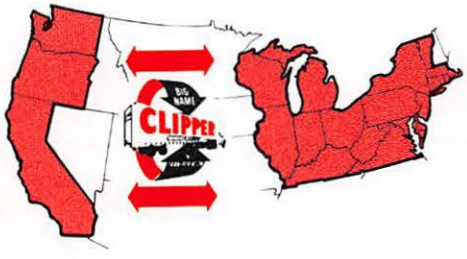
Planing reduces displacement—but at a heavy price



. . . on all your shipments,
depend on the ENERGY SAVER

CLIPPER
EXXPRESS Piggyback

3401 West Pershing Road, Chicago, Ill. 60632
CALL 312-376-7400
OFFICES AND TERMINALS IN MAJOR CITIES



DIRECT DAILY SERVICE

- ☆ From the Midwest and East to ALL points in California, Oregon, Washington, Alaska and Hawaii.
- ☆ From ALL points in California, Oregon and Washington to ALL points in the Midwest and East.

The Intelligent Choice Is Piggyback!

Circle 11 on Reader Service Card

. . . a PROVEN system for divided locomotive power.

LOCOTROL®

More than 300 LOCOTROL systems are operating on major railroads in the United States and other countries–paying dividends in the form of fuel savings, faster brake response, controlled slack, reduced lading damage, longer trains, and better utilization of available power.

LOCOTROL provides precise, automatic remote control of throttle and braking from the lead consist to a second consist coupled at an optimum load point within a train. Because the remote locomotive applies or releases brakes at the same time as the lead, application can be completed 50% faster and release times can be reduced by 65% or more. The train brakepipe can be charged in one-third the usual time.

While these added safety factors and time-saving features are an important consideration, one of the most significant benefits LOCOTROL offers today's railroad is increased fuel economy through a more efficient application of available power and traction. Wheel flange resistance is reduced, because the two consists are not in a curve at the same time. Using LOCOTROL, longer and heavier trains can now be operated on grades and curvatures which severely impede conventional equipment.

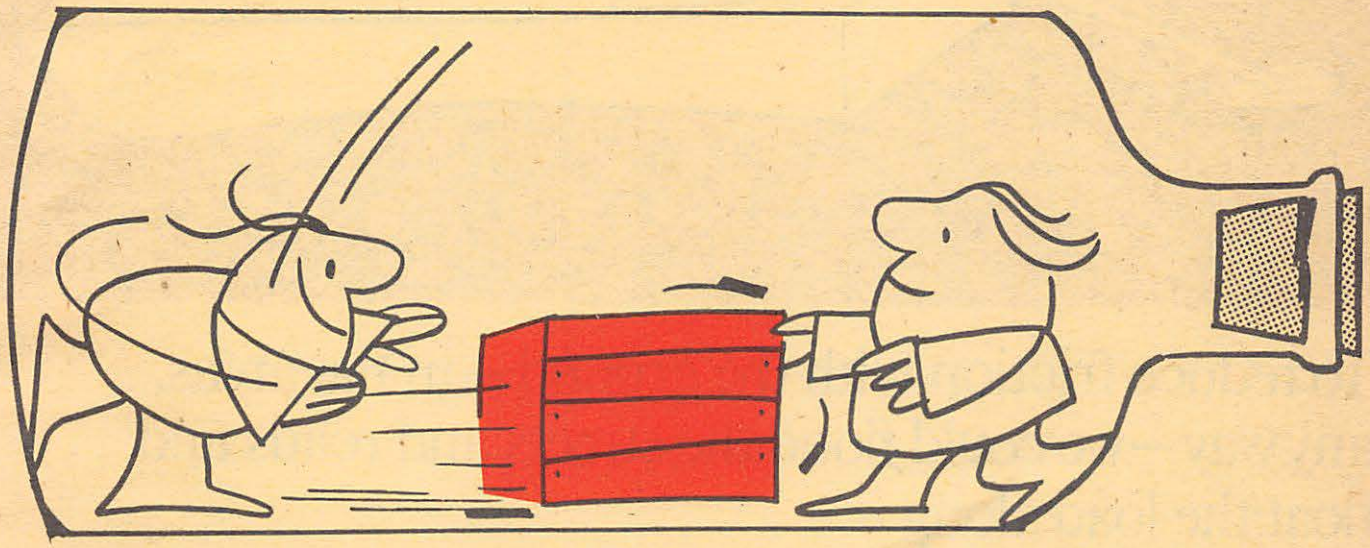
For more information on these and the many other benefits of LOCOTROL remote locomotive control, call or write Harris Controls now. P.O. Box 430, Melbourne, Florida 32901. Telephone: (305) 727-5764. A Division of the Harris Corporation.

HARRIS COMMUNICATIONS AND INFORMATION HANDLING

Circle 28 on Reader Service Card

Freight, Logic and the Fuel Shortage

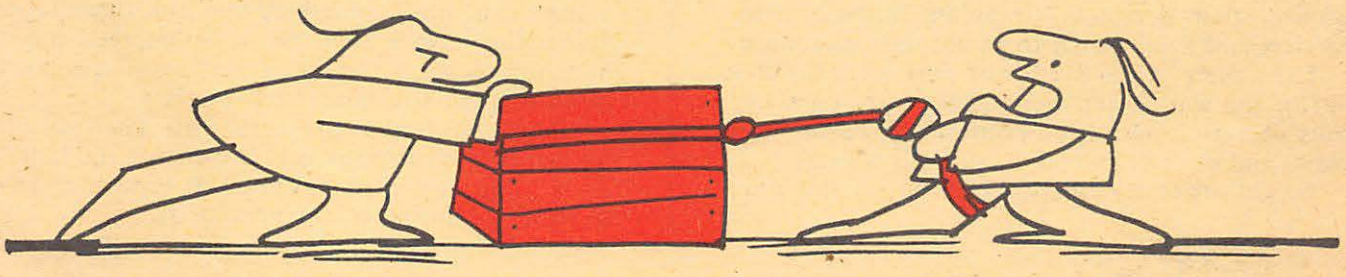
BY GEORGE DUSENBURY



If we lived in a vacuum paved with super-slippery 100% friction-free banana peels, how easy it would be to move things! Assuming a level route, to move a load from New York to San Francisco, we'd only have to overcome its inertia, then watch it disappear into the distance with no loss in speed.

We'd phone the recipient in San Francisco to keep an eye open. Then it would be up to him to overcome its inertia and stop it.

(Of course, we *would* have the problem of finding something to brace ourselves against in order to push or catch anything very heavy in a friction-less environment!)



But in the real world, we're up against the opposition of unrelenting friction at every move. *The ultimate cost of transportation is the cost of overcoming friction,* you might say. Friction is what burns up the fuel.

Freight has to be moved—raw-materials, manufactured goods, agricultural products—before anything else can happen. And the less fuel it takes to move the freight, the more fuel there is left over for America's industries, homes, automobiles.

So what's the most friction-free way to move our freight?

Let's see. . .

To reduce friction with the ground—in flat areas, anyway—we could flood the streets and roads and float the load along

That's better than dragging the load along on the ground. But friction hasn't let go by any means!

Lift a stone out of water. Why is it wet? First, the water molecules in direct contact with the stone cling to it. Second, the next layer of molecules clings to the first. And so on. There is some sliding action between layers, of course, or nothing could move through water. But this clinging is a serious drag on hull movement.

In fact, wetted surface produces so much friction that designers of racing sailboats trim rudders and keels down to an absolute minimum.

Then there is the matter of pushing the water out of the way to let the load through. Tons and tons of water. Watch enormously powerful tugs churn and struggle to inch a cruise ship along.

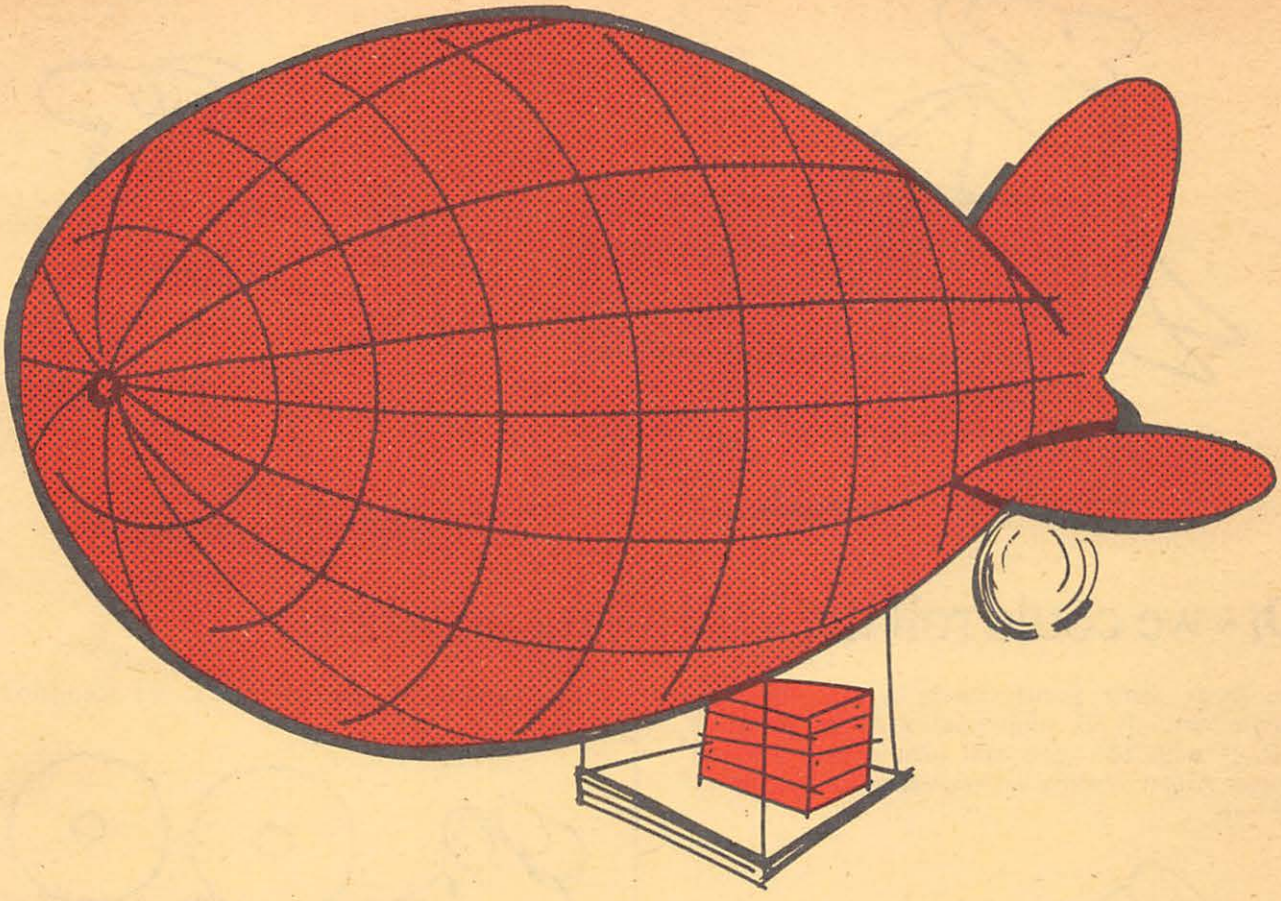
To get around pushing water out of the way, the V-bottomed planing hull has been developed. With enough power, you can push the load up on top of the water and *travel.*

But there are enormous power losses at the propeller, which may be on the order of only 50 to 60% efficient. And skin friction becomes radically more restraining as speed increases.

Then there is wave forming. This imposes such great restraint on hull movement that it has been estimated that a new model Navy attack submarine can travel something like four times faster below the surface than on it. Submerged travel, however, poses a variety of perhaps insurmountable problems to commercial vessels.

Clinging water has the further disadvantage as a transportation medium that it can grab the hull in an icy grip in winter and lower it onto the canal or river bed during summer droughts.

Planing reduces displacement—but at a heavy price

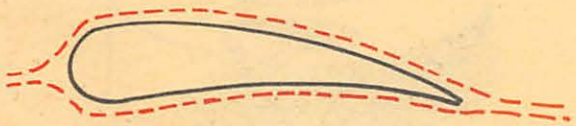


Or—we could float the load in air...

How serious air friction is depends on how fast you're going. Meteors catch fire from friction while so high the air is too thin for us to breathe. Space craft couldn't re-enter the atmosphere until nose cones were developed to withstand the prodigious frictional heat.

But a body like a dirigible can be driven at moderate speeds through the air much easier than its counterpart could be driven through water.

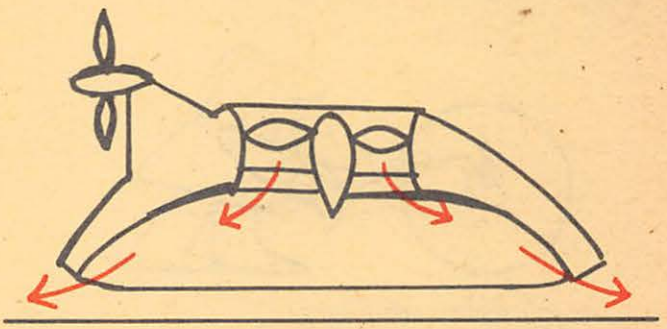
A dirigible in a storm, alas, can be as vulnerable as a whale in a whirlpool. After many a disaster, the Navy finally gave up its dirigibles.



...or on air via airfoil

The air parted at the leading edge of an airplane's wing travels a greater distance over the top of the wing than over the bottom. The air is "thinned out" above and the greater air pressure against the underside of the wing produces a lifting effect.

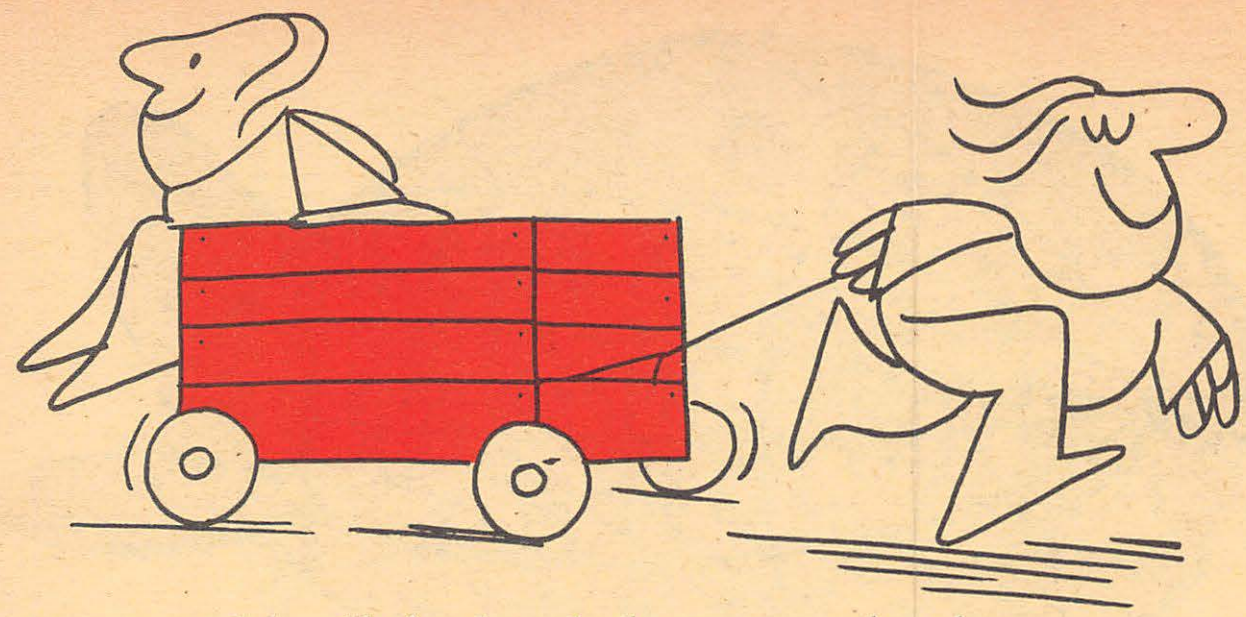
But the cost of the speed needed to become airborne is enormous—witness the giant fuel tanks of an airplane. Fuel-consuming friction is there all the time—clawing at undercarriages until they are retracted, clawing at every rivet head, at every knife-like trailing edge.



...or on air via cushion

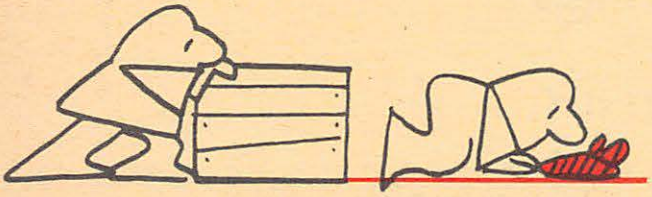
High in the air, a hovering helicopter produces a long slipstream below it. During landing, the slipstream meets the ground and a cushion of air is built up. In a hovercraft, this "ground effect" is enhanced by putting a "skirt" around the downward driven air.

A hovercraft has the merit that it can travel over any reasonably flat surface—land, water, swamp, snow, ice. But the cost of constantly pumping air to avoid frictional contact with the ground is great. When oil drilling equipment is carried up near the Arctic Circle, for example, the downward thrust of compressed air is so great that the hovercraft functions as an ice breaker. You're using big power—*fuel*—just to stand still!

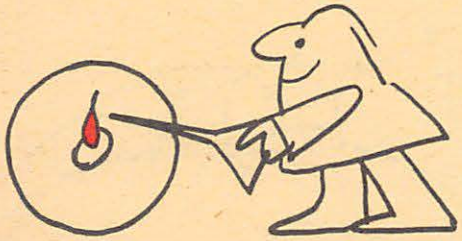


Or-we could roll the load along on wheels

The great thing about wheels is that they eliminate virtually all sliding action at the point of contact with the road and turn it into a much shorter *rotary* sliding action within a bearing at the hub.



(Instead of greasing the skids. . .

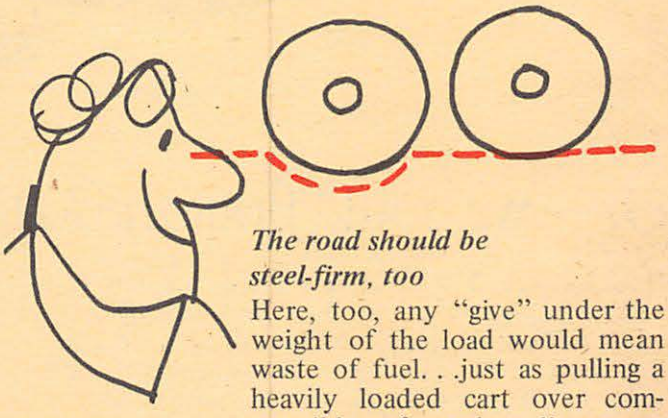


. . .we lubricate a small area)

In the hub, a supply of lubricant can be retained and protected from friction-producing dirt. Too, the rolling action of the wheel on the road can be reproduced on a smaller scale in the hub itself–with ball or roller bearings.

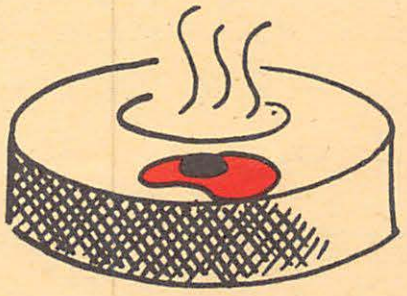
Wheels should be firm as steel

to minimize friction. Any "flattening" at contact with the road would represent energy-consuming deformation of the material of the wheel or tire–waste of power–useless consumption of fuel.

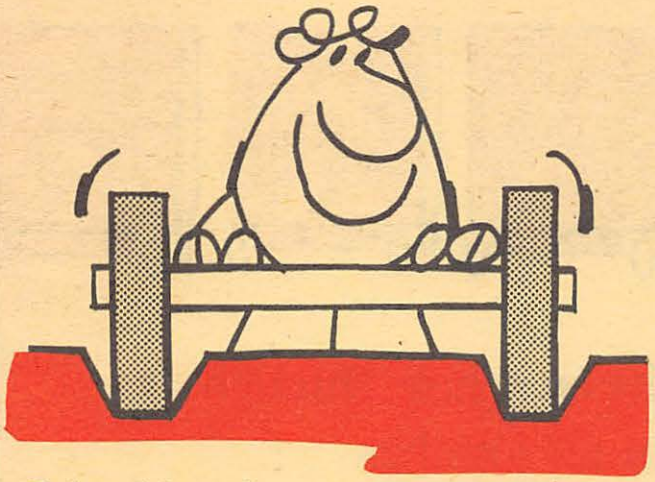


The road should be steel-firm, too

Here, too, any "give" under the weight of the load would mean waste of fuel. . .just as pulling a heavily loaded cart over compressible soft sand or dirt means extra work and consumption of energy.

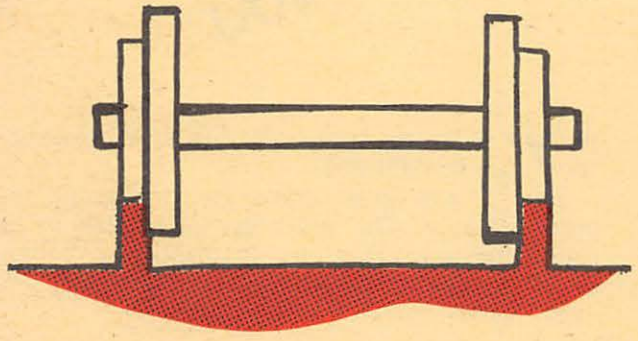


Tires can get hot enough to fry an egg. The continual flexing of a rolling rubber tire as it flattens against the road builds up tremendous heat (as when you repeatedly bend a piece of metal back and forth to break it; the metal can get almost too hot to handle). This heat is a measure of the force and fuel it takes to roll a tire. To combat this flexing and fuel waste in a recent automobile mileage contest, the winning car had special tires pumped up to 200 psi (gas-saving, of course, but impractical for normal truck or automobile service).



Ideally, the road would "steer" the wheels

If our steel-like road had ruts in which the wheels could travel, steering would be unnecessary and many accidents caused by driver failure would be prevented. But such ruts would fill with dirt and water and freeze over in winter.



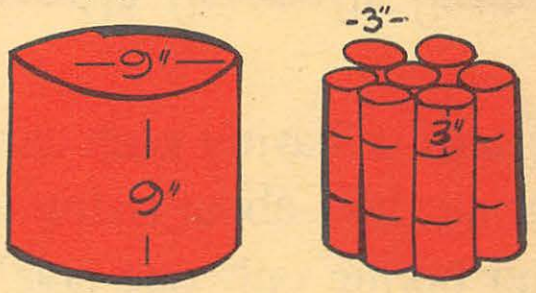
It would be up out of the weather

"Inverted ruts"—teamed with flanged wheels—would have the great advantage that water would drain from them. And they would provide the "guided movement" that can make automated transportation possible.

Take away an automated factory's assembly lines, conveyors, transfer machines and the guiding slides on which tool heads travel—and you could forget automation. Without guided movement, a factory's sensing devices and programming equipment would be useless.

Guided movement will prove to be equally essential to the automation of transportation. And automation is a labor-saving economy that no country can afford to pass up in the time ahead.

For least friction per cubic inch, engines would have very large cylinders



There has been so much advancement in lubricating oils that many people have assumed that moving the pistons up and down in the cylinders of a gasoline or diesel engine is a pretty effortless affair. Not so. One automobile manufacturer has estimated that at 30 mph it takes more power (fuel) to overcome friction within the engine than reaches the real wheels to drive the car.

Many people also imagine that the reason manufacturers no longer give you a crank with your car is the higher compression of today's engines. Not so. At every point in an engine's cycle, decompression in one cylinder exactly matches the compression in another. *It is fluid friction in the lubricant separating closely-fitted engine parts that eats up the fuel.*

"Braking against compression" is a euphemism. What you're really braking against is *friction.*

(Actually, it was the great increase in automobile engine size and power—and the much closer fitting of engine parts—that caused the abandonment of hand cranks.)

The best way to minimize fuel-consuming friction within an engine is to use larger cylinders. Note in the sketch above that one 9" x 9" cylinder contains a considerably larger total combustion (power-producing) area than 21 3" x 3" cylinders.

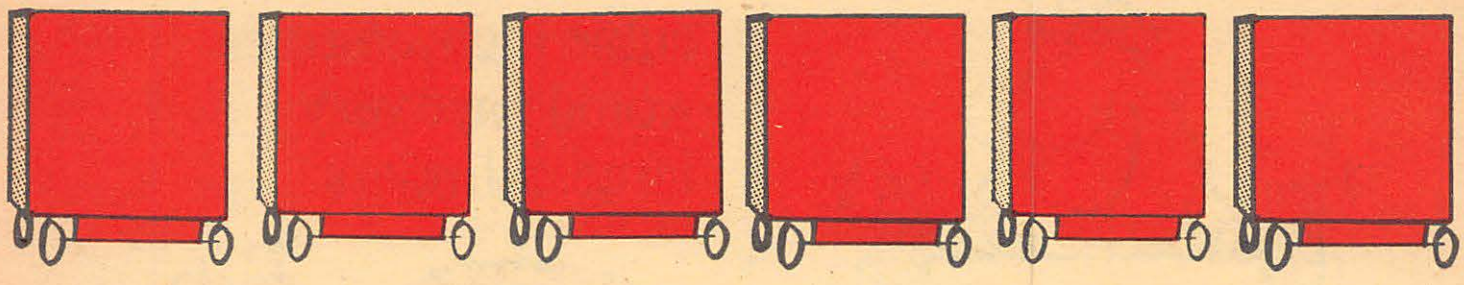
The one big cylinder contains 573 cubic inches, whereas the 21 smaller cylinders contain a total of only 445 cubic inches.

Yet for all its greater power, there is in the large cylinder less than half the opportunity for cylinder wall friction that there is in the 21 small cylinders. The large cylinder has 254 square inches of cylinder wall—the 21 small cylinders have a total of 594 square inches of cylinder wall.

The law of geometry that governs here is this: the bigger the cylinder, the less wall surface it takes to enclose a cubic inch of volume.

So put "very large cylinders" on your checklist of qualities of the freight transportation system that can carry America's load with the smallest expenditure of fuel.

Back to air friction...

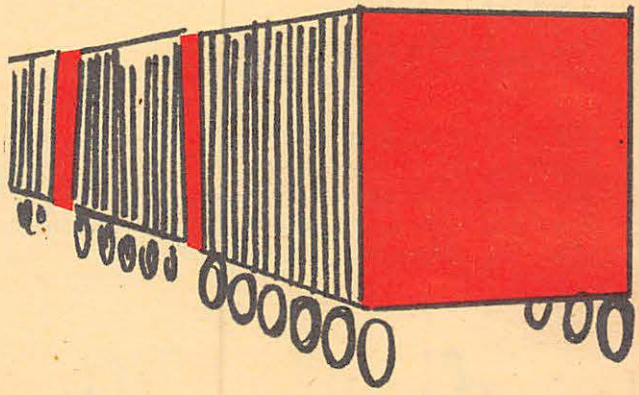


Instead of having each car bore its own hole through the air, how about stringing them all together and boring only one hole?

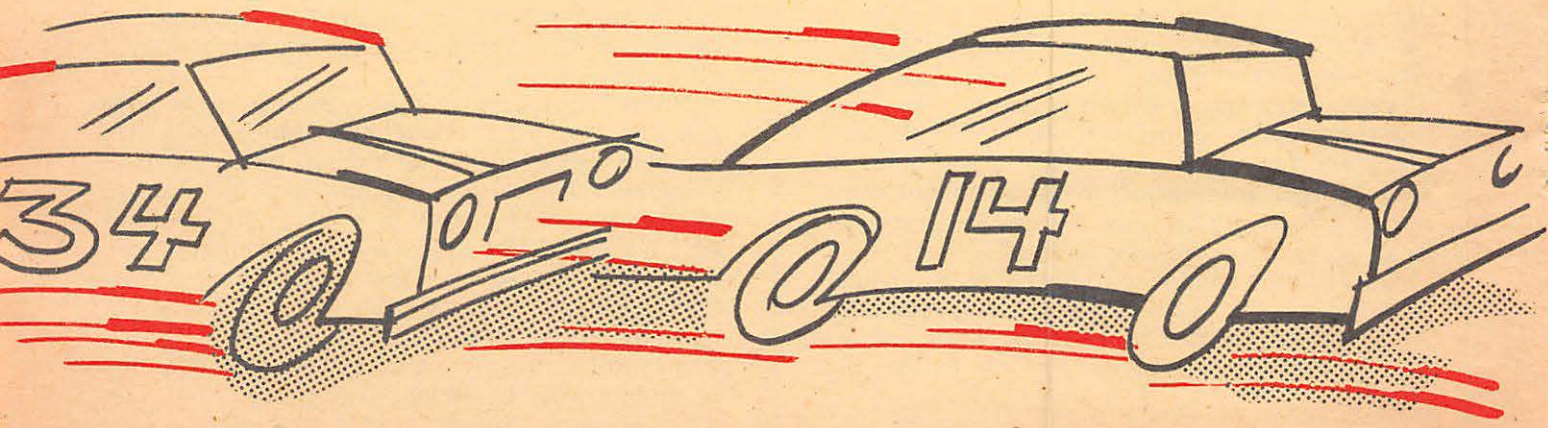
The advantage to a vehicle of not having to push the air out of its way can be tremendous. For example, a bicyclist recently reached the improbable speed for such a vehicle of 150 mph. He had special gearing between pedals and hub, of course. Tires were blown rock hard to minimize rolling resistance. But the main thing going for him was a powerful "windbreak" vehicle traveling just ahead of him. With the air pushed out of the way and sucked along just ahead of him he was traveling at close to zero air speed.

On the race track, two cars on the same team will take advantage of this windbreak opportunity by "drafting." One noses into the low pressure area behind the other, cutting way down on his frontal air resistance. The front driver benefits, too: the following car diminishes the low pressure area clawing at the back of his car. Both cars go faster, burn less gas. In fact, if all the cars on the track gathered in one long string, they'd all have easier going. And what you'd have would be a. . . .oops, we almost got ahead of our story!

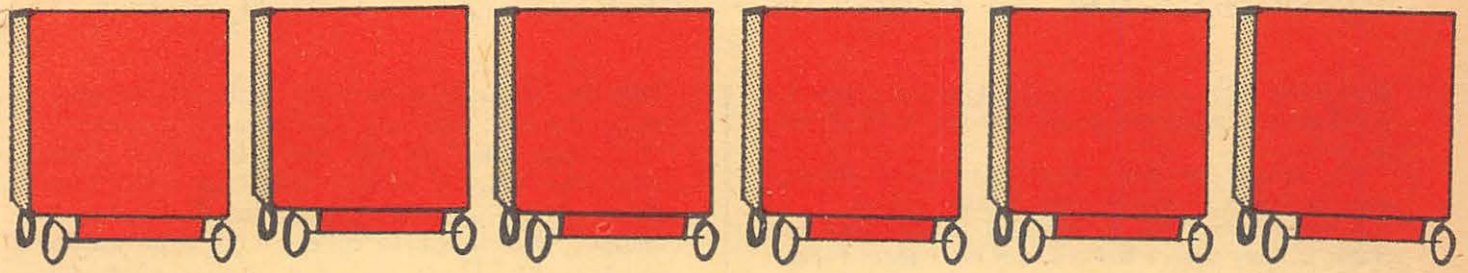
Air resistance becomes more and more important as freight speeds get higher and higher—a trend sure to continue.



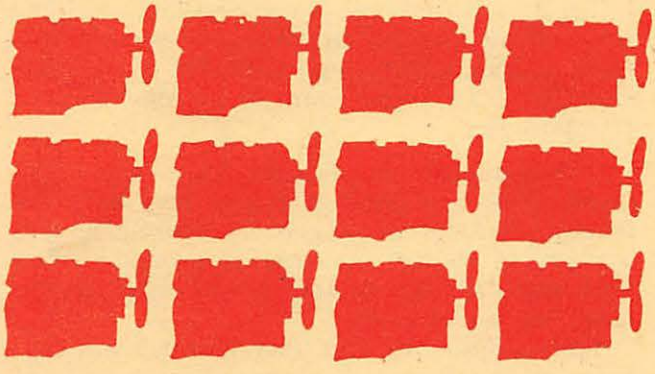
The 12 cars shown above are for diagrammatic purposes only. The advantage of a series of cars following each other closely through a "tunnel" in the air could as well be extended to, say, 100 cars.

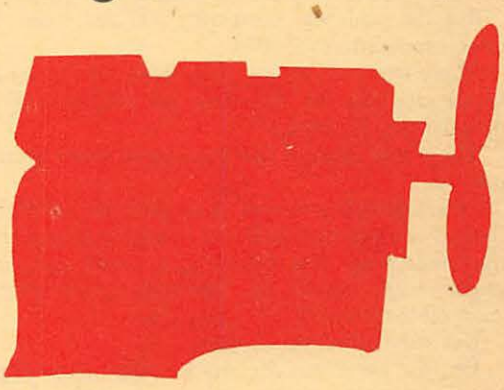


Racing drivers call taking advantage of the car ahead "drafting"



Doing this would have three other advantages:



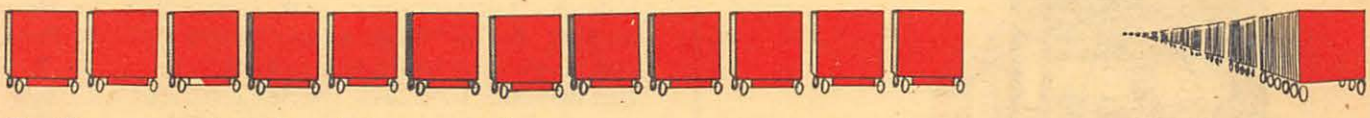


1. Instead of, say, 12 little engines, one big engine

One big engine is far cheaper to manufacture and maintain than 12 small ones—and much, much cheaper to operate. Basically, it has far less total cylinder wall area for frictional contact.

2. Instead of, say, 12 drivers, 1 driver

With vehicles strung together and guided by the rails on which they travel, no one has to steer—nor does each vehicle require a separate driver to start, stop and control its speed.



3. Instead of wide roadways, narrow roadways

Hooking transportation units together in narrow, compact strings—wherever it is possible—is America's best hope of holding the line against proliferating highways. (It is estimated that one third of the modern city has already been bulldozed into streets and parking places for cars and trucks. Boston has passed a law against any further highway construction. Dade County officials say they would need the protection of the National Guard to build another highway into Miami. San Francisco halted an expressway in midair.)

So conservation of living space is an important byproduct of our logic-defined form of freight transportation . . .one that would use the least of our precious fuel supply to overcome friction in contact with the ground, friction in contact with the air, and friction between the moving parts of the engines that drive it.

What rolls on steel wheels over steel rails, with big power up front and a multiplicity of towed cars?

What we have "invented" step by step in our search for rock bottom transportation fuel economy is, of course, the train.

Why then, if the train is so efficient, is it not far and away the dominant form of freight transportation?

Because it was born far ahead of its time—and was caught in three traps, *which we must think about and act on if we are to use trains as we should to help solve our long-term fuel problem.*

Ironically, if the train had come along *after* the automobile, truck and airplane, it would have been hailed as a great technological step ahead!

But the train was born over 100 years ago—into a sort of transportation vacuum.

There was a continent to be developed, river-and-harbor based cities to be joined in an overland network, new industries to be served.

There was nothing else but horses and wagons to do the job.

The railroad response was quite wonderful—a revolution in mechanical, civil and electrical engineering—and in manufacturing, too. Indeed, a more lagging response might have saved the railroads from becoming too vulnerable to trouble of many kinds.

But vulnerable they became.

Because there was literally no other way for people and goods to move faster than a loaded horse, railroads extended their lines into thousands and thousands of small-scaled communities—even though trains were by their very nature large in scale. Later, smaller transportation units such as trucks, buses and aircraft would make this "local delivery" type operation—passenger service in particular—utterly uneconomic.

Trap No. 1—Because the race of the railroads to keep up with the growth of the country discouraged less efficient modes, the railroads naturally developed in a pattern of monopoly. There were abuses—as there were in oil, electric power, telephone service, patent control—and the railroads were chained with monopoly-type regulations which burden them cruelly now that cars, trucks and airplanes have come along to make transportation fiercely competitive.

Trap No. 2—Because so much that moved had to move by rail, the railroads became convenient "tax collectors." It was easier to collect taxes from the railroad—which would in effect pass them on to all the people in the form of charges—than it was to collect them from people individually. Then the time came when the railroads' economic power shrank but the tax load did not shrink.

Trap No. 3—Because railroad strikes could bring the country to a standstill—and because railroads in the days before serious competition could in a sense afford wasteful use of manpower—the railroads became saddled with a need to use workers wastefully to a degree found in no other form of transportation.

Over-regulated as though they were still monopolies, over-taxed as though they were still money machines on wheels, over-supplied with workers as though the laws of economics had been repealed, the wonder is that railroads can make any money at all.

Thus despite the fact that railroads are four times more efficient than trucks in their use of fuel—sixty-two times more efficient than airplanes—railroads on the average have been able to earn a profit of only 3% on their investment. How do you modernize to develop your full potential on profits like *that?*

Now that the world's developing fuel problem forces us to closely examine our use of fuel, we should all see that:

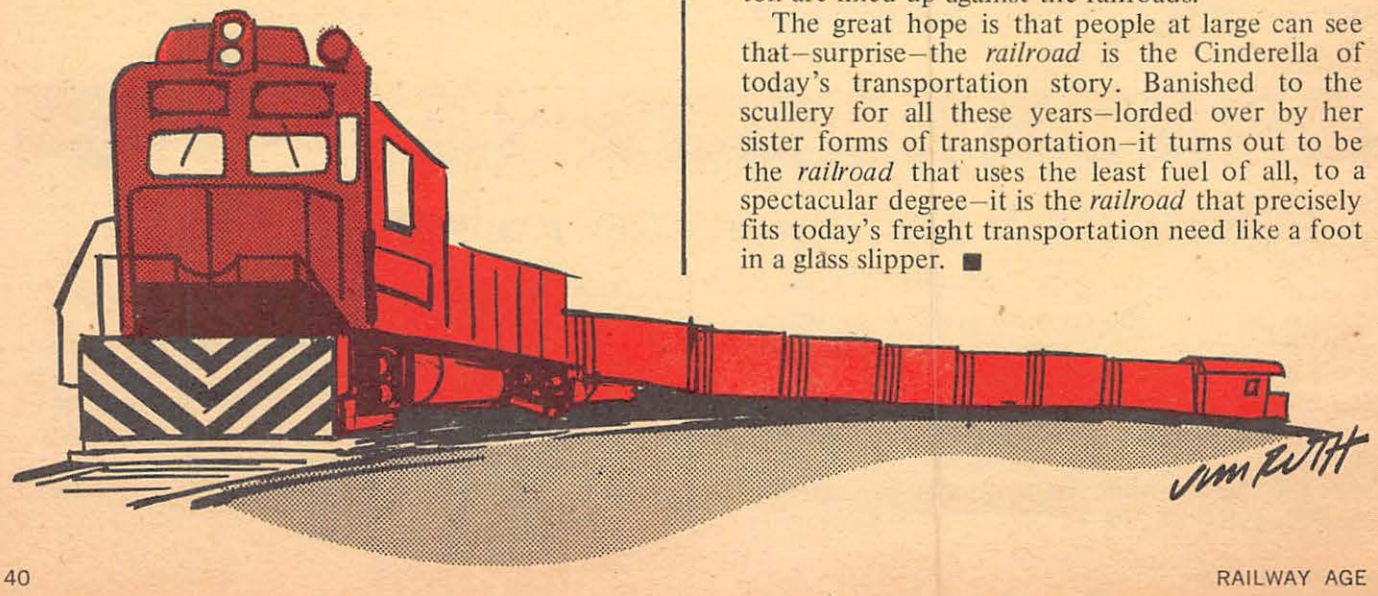
It is the three historic traps in which the railroads have been caught that have prevented them from giving America the full benefit of their miserly use of fuel and other economies.

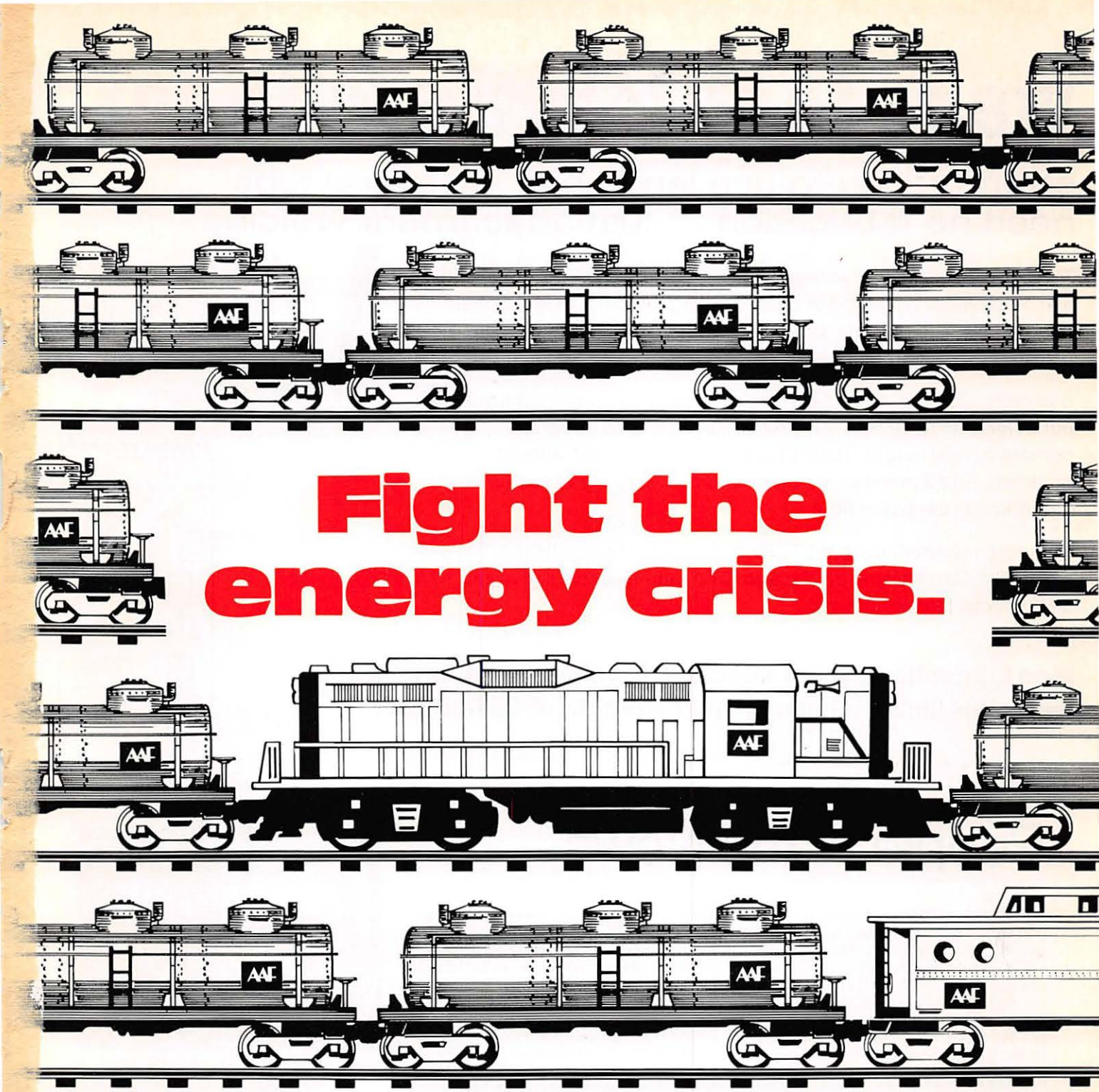
Springing the traps won't be easy.

Adjustments—however just over-all—always seem unjust to some of the people affected.

Some of the most powerful lobbies in Washington are lined up against the railroads.

The great hope is that people at large can see that—surprise—the *railroad* is the Cinderella of today's transportation story. Banished to the scullery for all these years—lorded over by her sister forms of transportation—it turns out to be the *railroad* that uses the least fuel of all, to a spectacular degree—it is the *railroad* that precisely fits today's freight transportation need like a foot in a glass slipper. ■





Fight the energy crisis.

Save 1600 gallons* per locomotive per year.

The AMER-kleen cartridge engine-intake filter operates at 4″ less pressure drop than paper filters. For each inch, you save 400 gallons of fuel per year. With a total savings of 1600 gallons.

Imagine what that adds up to for your entire fleet in a year's time.

For full information on AMER-kleen's fuel and cost savings, write: Manager, AAF, Railroad Products and Systems, Dept. 111, Box 1100, Louisville, Kentucky 40201. In Canada: 400 Stinson Blvd., Montreal 9.

Better Air is our Business.

*Based on G.P./S.D.-40 performance.

AAF American Air Filter
RAILROAD PRODUCTS
Circle 12 on Reader Service Card

we go to all lengths with our "i

strong ready-to-use lengths of structural tube need no fabrication . . . just attachment welding

TUBESILL! It's the new instant centersill that drops into place with just attachment welding. No other welding, bracing, or stiffeners needed. TUBESILL is the strongest centersill you can buy and—most important—its installed cost is lower.

Basically, TUBESILL is a 14" x 14" x ½" structural steel tube custom cut in lengths to 80 feet. Since a square tube has superior compressive strength, TUBESILL takes extra impact without buckling. And it maintains dimensional consistency of section and straightness time after time.

For more information about TUBESILL, contact our railroad specialist, Carl Knispel in Chicago (312) 646-4500. He'll give you all the facts. No fabrication!

WTC WELDED

greater strength at lo

COMPARIS			
	SECTION NUMBER	DEPTH IN.	W P
	Z-26 (41.2#)	12 15/16	
	Z-26 (51.2#)	13 1/16	
	MODIFIED Z SECTION	12 15/16	
	W.T.C. TUBESILL	14	

■ no fabrication except attachment welding ■ uniform section time after time ■ minimum yield strength of 50,000 psi

W-115 Circle 44 on Reader Service Card

People in the News

BRITISH COLUMBIA HYDRO & POWER AUTHORITY.—J.N. Olsen has been appointed general manager, Vancouver, B.C., and will head the management committee, consisting of himself and assistant general managers in charge of electrical operations, administration and finance, engineering and gas. Mr. Olsen was formerly assistant general manager, electrical operations.

CANADIAN NATIONAL.—Pierre Taschereau appointed chairman and **Robert A. Bandeen** named president and chief executive officer. They succeed **Norman J. MacMillan,** chairman and president since 1968.

DELAWARE & HUDSON.—Kenneth Dodge, assistant to engineer signals & communications, Albany, NY., appointed assistant engineer signals and communications.

ILLINOIS CENTRAL GULF.—Walter J. Cassin, director of labor relations, appointed senior assistant vice president-traffic. Mr. Cassin's labor responsibilities have been assumed by **Martin W. Fingerhut,** assistant vice president-personnel.

The Memphis Terminal division has been incorporated into the Delta division. **Jerry Bumpus,** superintendent of the former Memphis Terminal division, named superintendent, Delta division, with headquarters in Memphis, Tenn. **Labe Hogan, Jr.,** formerly superintendent, Delta division, named superintendent, Kentucky division, Paducah, Ky., succeeding **Arnold H. Burton,** transferred to the Missouri division, Bloomington, Ill. Mr. Burton succeeds the late **Howard Stockum.**

Edmond Pearson, general superintendent-car control, Chicago, named chief mechanical officer there. Mr. Pearson's successor is Chris Damiano, superintendent, Louisiana division, who in turn is succeeded by **John Lager.**

MILWAUKEE.—Leonard R. Norberg appointed director of property taxes, Chicago, to succeed **Max L. Boydston,** who retired after 32 years' service.

The Milwaukee has opened a sales and service office in Anchorage, Alaska. **Ronald L. Baker,** sales representative, Los Angeles, appointed district manager of sales, Anchorage.

MISSOURI PACIFIC.—Has established a Southern District, which includes the former Gulf and Texas Districts, and encompasses all operations in Texas and Louisiana. **James C. Love,** general manager, Texas District, Fort Worth, becomes general manager of the new district, with headquarters at Houston. Mr. Love replaces **Gerald M. Holzmann,** who retired after 48 years of service.

MISSOURI PACIFIC-TEXAS &

Robert A. Bandeen
CN

James A. Miller
PORTEC

PACIFIC.—William N. McCann, sales representative, Pittsburgh, named assistant manager-containerization St. Louis.

NORFOLK & WESTERN.—Joseph R. Neikirk, senior vice president, **Erie Lackawanna,** Cleveland, has rejoined the NW as general manager-terminals, Cleveland.

PACIFIC FRUIT EXPRESS.—A.J. Amtao, general superintendent, Omaha, appointed assistant general manager there, to succeed **Otto I. Larsen,** who retired after more than 45 years' service.

ROCK ISLAND.—Douglas C. Weitzman, manager of transportation, Kansas City, Kans., appointed superintendent, Illinois division, Silvis, Ill.

F, Doyle Martin, trailer service representa-

nstant* centersill"

TUBESILL

TUBE COMPANY OF AMERICA

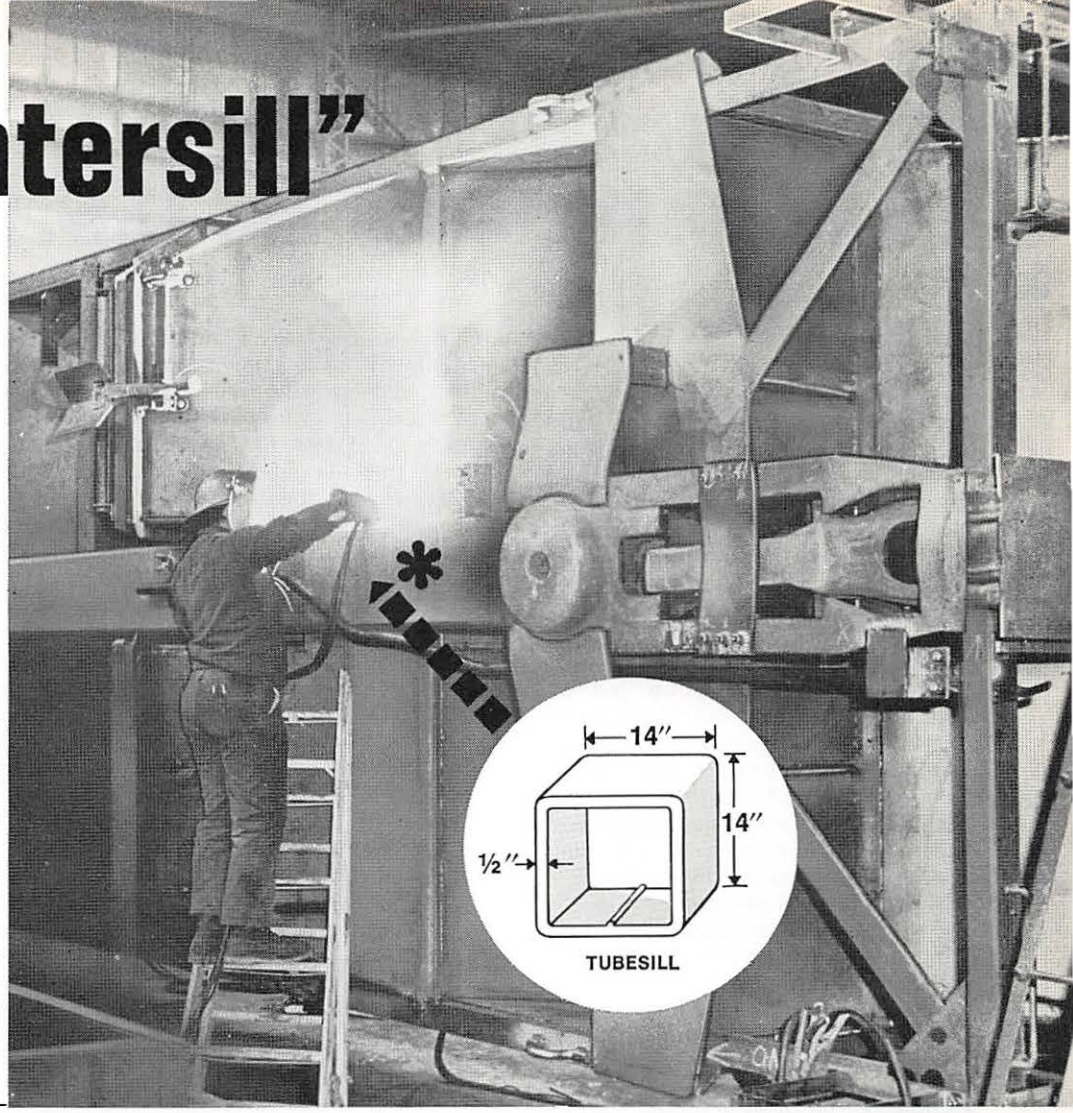
1855 EAST 122ND STREET • (312) 646-4500
CHICAGO, ILLINOIS 60633
SHUNK & VANDALIA STREETS • (215) 336-2000
PHILADELPHIA, PENNA. 19148

ver installed cost

ON — CENTER SILL SECTIONS

EIGHT R FT.	AREA	X-X AXIS			Y-Y AXIS		
		I	S	γ	I	S	γ
LB.	IN.²	IN.⁴	IN.³	IN.	IN.⁴	IN.³	IN.
32.4	24.24	626.0	95.0	5.08	1075.8	102.4	6.66
02.4	30.12	771.4	113.8	5.06	1347.4	126.8	6.61
32.4	24.24	626.0	95.0	5.08	766.9	111.0	5.63
38.2	25.93	769.0	110.0	5.45	769.0	110.0	5.45

POLAR MOMENT OF INERTIA J = 1538 IN.⁴
POLAR SECTION MODULUS Sp = 137.5 IN.³



tive, Houston, named district manager-foreign commerce there.

SOO LINE.—Doris L. Valley, assistant secretary, elected corporate secretary. Miss Valley, who will also continue as administrative assistant to the president, is succeeded by **Charles H. Clay,** assistant to the president. **M.D. Ross, Jr.,** director of taxes, elected assistant treasurer, to succeed **Ronald A. Brachlow,** who recently retired after 43 years' service.

TERMINAL RAILROAD ASSN. OF ST. LOUIS.—C.R. Hurt named assistant to president, and **C.C. DeWeese,** assistant general manager.

SUPPLIERS

James A. Miller has been elected president and chief executive officer, **PORTEC, Inc.** Mr. Miller, who has been president and chief operating officer, succeeds **John S. Newton** as chief executive officer. **B.H. Regenburg** has been elected chairman of the executive committee, to succeed Mr. Newton, who will continue as a director.

Werner H. Siemens has joined **International Engineering Co., Inc.,** as principal electrical engineer-transportation, San Francisco. He was formerly manager of electrification control systems, Railroad Electrification Section, **General Electric Co.**

General Electric Credit Corp. has named **Lawrence A. Bossidy** to head its $1.5 billion leasing program. Mr. Bossidy is a vice president of the company and has been head of GECC's accounts receivable financing business which supplies working capital to manufacturers and distributors.

Robert J. Wylie Co., St. Paul, Minn., has been appointed exclusive sales representative for the Montgomery tie destroyer, **Jacksonville Blow Pipe Co.,** for railroads headquartered in St. Paul, Minneapolis, Omaha, and Denver.

William J. Kouba has been named assistant vice president, sales, **Pullman-Standard Division** of **Pullman Incorporated.**

John M. Lillis, vice president of administrative services, **Realco Services Inc.,** has been promoted to vice president-finance. **John J. Pluemer,** controller, has been advanced to vice president-controller, and **William J. Radcliffe** to vice president-administration. Mr. Radcliffe was previously managing director of the office of information services.

Richard F. Klein has been named director of business research, **AMSTED Industries.** He was formerly director of real estate, **Libby, McNeill & Libby,** Chicago.

Ron R. Garbacz has been elected vice president, corporate planning, **Pullman Incorporated.** Mr. Garbacz was formerly vice president, corporate development, **Northwest Industries.**

Peter P. Pell has been appointed midwestern regional manager, **Railroad Division, XTRA, Inc.,** Chicago.

Pullman-Standard division of Pullman Incorporated has named **Fred Witting** technical specialist, **Jack Spence,** associate director in charge of the experimental division and materials research, and **Bradford Johnstone,** associate director, analysis.

Donald E. Eagon has been promoted to public relations manager, **Timken Co.,** Canton, Ohio. Mr. Eagon was formerly advertising specialist-industrial and corporate.

Robert Kobberger, Jr., has been appointed to the newly created position of director of product management, **Howe Richardson Scale Co.** He was formerly manager-marketing, **Worthington Standard Pump Corp.**

David D. Borland has been appointed vice president-manufacturing, **Westinghouse Air Brake Division** of **WABCO,** Mr. Borland will report to **Murray J. Franklin** vice president and general manager at Wilmerding, Pa. and be responsible for all phases of manufacturing for the division, which serves the rail and mass transit markets.

National Electric Control Co., has acquired **G.A.P. Co.** (Gate Arm Products) for the manufacture of grade crossing protection products, including wooden and reinforced fibre-glass gate arms. These products will be manufactured by a newly formed company, **National Electric Gate Co.**

Would greater reliance on railroads' energy efficiency aid U.S. economy?

By FRED HOUSER
Mechanical Editor

While energy-efficient railroads stand to be given a greater role in meeting the transportation needs of the U.S., it remained for a recent national conference in Madison, Wis., to weigh the effect that such increased reliance on rails will have, not only on the railways, but on other sectors of the economy. The conference was sponsored by FRA and the University of Wisconsin.

For two days the group, led by Federal Railroad Administrator John W. Ingram, looked at various facets of the problem. "For example," said Ingram, "what are the trade-offs between sufficient railroad branch line operations and truck-substituted service to communities on these lines?" He outlined a number of other challenges:

—How should the branch-line abandonment question be considered in light of the fuel shortages?

—At what level of cost will railroads require adjustment in current rates and changes in operating schedules?

—Should priority be given to consideration of alternative energy sources such as electrification?

Since the railroad industry consumes only 3½% of the 18 trillion BTUs annually expended as transportation energy input, any fuel conservation practices within the industry would have relatively little effect on the nation's petroleum consumption. Acknowledging that the nation's commerce cannot be quantified exclusively in ton-miles, Ingram stressed the importance of forestalling any effort to "run all our freight on trains because they're more energy-efficient."

● **Case study.** Ingram identified as two main needs those for better railroads and opportunities for better railroading. "Part of the reason we waste fuel hauling artichokes from Castroville, Cal., to New York City by truck is because railroads can't guarantee fresh artichokes to New Yorkers. Railroads could make the shipment and be competitive. They could carry four to five times as many artichokes for the same amount of fuel consumed by a truck. But railroads don't get—or want—the business for a couple of reasons.

"First, the railroads have a difficult time (especially in the Northeast) making sure the shipment will get there. Second, the government-regulated freight rates make it highly uneconomic for a railroad to chase after the fresh produce business. You don't make much money hauling perishables on a railroad, and institutional barriers have long stood as a firm roadblock to changing the system. But if railroads are to meet present and future demands regarding energy, then the system must be changed. If railroads are to be efficient purveyors of transportation, then they are going to need some help from Washington and from the state capitals."

Ingram continued: "What railroads do best is move large quantities of heavy freight over long distances with minimum fuel consumption, minimum manpower and minimum cost. They do not do a very good job of local pickup and delivery at the neighborhood grain elevator one day a year (although the track is there the other 364 days); they do not do a very good job of moving half a busload of passengers from one small town to another.

"If railroads are to be efficient purveyors of transportation, they are going to need help from Washington and state capitals."

. . .John W. Ingram

"But railroads can haul grain in unit trains to deepwater ports. Railroads can haul thousands of commuters into New York or Chicago and keep highways open for those who have to use them. Yet they don't get as much of that business as they should and they are forced to operate in areas where the economics are just not right and probably never will be."

● **Market distortions.** Eric Hirst, research program officer of the Federal Energy Office, pointed out that "in a perfectly competitive economy, market forces would eliminate wasteful energy-use practices. However, a variety of government activities—regulation, taxation, subsidization, research—influence transportation practices. Active Federal involvement will be required to reduce market distortions and implement energy conservation measures.

"Recent history shows a steady growth in transportation energy use at a rate more than double the population growth rate," explained Hirst. "Current trends show continued growth in traffic levels, shifts toward energy-intensive modes and general declines in modal energy efficiency.

"Oil scarcities, however, and increasing dependence on petroleum imports, coupled with environmental concern, could change these historical trends. Transportation energy conservation measures would ease pressures on scarce energy resources, reduce increases in pollution from fuel burning, lower balance-of-payment deficits, and generally save money for transportation users.

"It is technologically feasible to slow transportation energy growth by increasing energy efficiency through shifts in modal mix, improvements in vehicle fuel economy, and increases in load factor. Slowing transportation energy growth appears to be a desirable and perhaps necessary national goal. . .We need to act promptly in developing transportation energy policies and practices because of the one or two decades required to fully realize energy savings."

In estimating that as high as one-third of the U.S. Gross National Product is being consumed in transportation, Secretary Norman M. Clapp of the Wisconsin Department of Transportation observed that "the tremendous rate of increase in the cost of purchasing labor, plant and equipment, environmental protection and especially fuel, indicates that our most fundamental transportation issue is the necessity to reevaluate past policies to encourage development of a more efficient transport network. It is here that our nation's railroads must play a prominent role.

"Attention must be focused on efficient utilization of our scarce energy resources. Since transportation consumes almost three of every five gallons of petroleum produced, and 30% of all energy used today, it is becoming abundantly clear that new strategies of energy conservation must be developed. Any such strategies must give railroads a prominent role."

Dr. Fred Cottrell, director of the Scripps Foundation for Research in Population Problems, predicted a railroad revival coincident with the energy decline. "The potential of the railroads for reducing both energy costs and pollution can be realized only through tremendous efforts capable of overcoming those of all the sets of interests who have gained and hope to continue to

(Continued on page 48)

REDUCE STRESSES AND CENTER PLATE FAILURE

Rail dynamics researchers now agree that freight car sway produces high stresses in truck bolsters and body center plates—a clue to most center plate failures.

Several years ago, we set out to stabilize this freight car sway and created a fail-safe shock absorbing system that effectively broadens the car-to-truck contact area. We call this system C-PEP.

This breakthrough means thousands of dollars in maintenance savings for railroads. C-PEP drastically reduces center plate wear and practically eliminates center plate metal fatigue and fracture.

C-PEP has highballed on more than 10,000 AAR-approved 100-ton cars since 1967 without a single wheel lift-off derailment. Wear on bolster gibs and side frames of cars with more than 250,000 miles has been only nominal.

C-PEP not only allows safe low-speed rough track negotiation; it also controls truck hunting, permitting higher speeds for empty cars.

Simple, inexpensive and easy to install, C-PEP involves no post-application adjustments and requires only a single roller side bearing.

"Talk to the man from Barber"

BARBER STANDARD CAR TRUCK COMPANY

332 S. MICHIGAN AVENUE, CHICAGO, ILLINOIS 60604, U.S.A.
CABLE: CARTRUCKS

Barber Products are designed and engineered exclusively by Standard Car Truck Company, and are available under license in Australia, Belgium, Canada, Japan, Mexico and South Africa.

Circle 14 on Reader Service Card

Phil

THE 20 MINUTE TRANSPLANT

For centuries, man has been trying to increase the span of life. In himself and in the things he loves most.

At Fruehauf, we love trailers. So it's only natural that we would try to make them better, to last longer. And a damaged or worn kingpin can shorten the life of the toughest piggybacks around. Or send them to the shops for long, expensive repairs.

That's why Fruehauf developed the removable kingpin. It works like this. A high-strength kingpin retainer block is permanently welded into the upper coupler structure. Then a removable kingpin, made of the same high-strength alloy, is bolted into place with aircraft-type high-strength bolts. The threads are even coated with 2 special epoxies which combine to seal the bolts in place.

Now, what you've got is a Fruehauf Z Van, one of the toughest trailers ever made. Plus our new removable kingpin.

And this time, when the kingpin is worn or damaged, one man can replace it with a brand-new kingpin and brand-new bolts in less than 20 minutes. And we think that's a lot better than replacing the whole coupler assembly.

That's why you're way ahead with Fruehauf behind you. TOTAL TRANSPORTATION

FRUEHAUF

Circle 15 on Reader Service Card

"Decline in available energy. . . forces us to make new choices, with the revival of railroads to be a likely result"

(Continued from page 44)
gain by keeping railroads from becoming more competitive. If the more energy-efficient railroads are to be used, it can come only as a result of a major shift in the hierarchy of values of Americans who have sufficient power to require it, and a modification of the power position of the railroads vis a vis those who up until now have prevented changes that would allow railroads to move toward greater efficiency as measured in terms of energy."

● **Role for electrification.** "In the next decade or so," said Cottrell, "the economy of the U.S. will rely heavily upon increased use of coal and of atomic fission to offset declining availability of gas and petroleum and to provide increases in the use of power. Gas and petroleum will be used for off-road vehicles and for petrochemicals—particularly plastics, synthetic fibers, pharmaceuticals, fertilizers and pesticides. The industries that produce these products will be able to pay prices sufficiently high to secure petroleum and gas. Cheaper coal and nuclear energy will be used as fuels for power and heat."

While some electricity will be generated at mine mouth and some coal will be distilled to furnish gas and liquid fuels transportable by pipeline, "much of the coal will be mined in arid regions where the value of water for other uses will preclude its extensive use in generation of electricity or gas. A great deal of the coal used as heat and in power generation will be shipped by rail."

Pollution produced by coal burning can be reduced most effectively in stationary plants, dictating electrification of railroads, according to Cottrell. "New coal burning power plants yield efficiencies far above those of the diesel used on the railway or highway. Whether increased efficiency can result in net dollar decreases in fuel costs, depends upon the increased overhead costs that come with electrification. But any shift to coal or the atom will probably increase the disparity between the ton-mile energy costs of highway freight and those of the railroads.

"There are barriers in terms of government budgets where the priority that must be given to the railroads if they are in fact to do the job will displace that of many other values long given a high place in politics," concluded Cottrell. "A shift in the sources and costs of energy forces changes in the choices for action. But inevitably decline in available energy imposes new unavoidable limits on what we can do and forces us to make new choices with the revival of railroads to be a likely result."

The financing of railway electrification was examined by A.E. Michon, assistant vice president-corporate planning, Burlington Northern. While economic principles, if left to operate freely, could create a better quality of life for all in the long run, he said, "unfortunately, the long run often exceeds the remaining lifetime of those who have political or economic power so they subvert the laws of economics by resorting to distinctly uneconomic policies, including bad business investment decisions. Economic principles are crucially important to society and social welfare, and they are enormously important to the firm and its long-run ability to serve society and renew its assets over time."

Michon questioned that low locomotive maintenance, high adhesion, minimizing of air pollution or high mechanical efficiency really comprise "the economics of electrification." While most railroads have weighed electrification as the option to continued in-kind replacement of diesel-electric locmotives, he also cautioned that attractive financing can never make "an uneconomic project acceptable." Economics should be determined first, he explained, "and if acceptable, then the cheapest source of financing should be secured. Cheap or subsidized financing of projects which do not meet the Corporate Hurdle Rate (a rate of return on capital sufficiently above the weighted incremental cost of capital to the firm so that new investments at this level will overcome the low earnings on present sunk investment and so the corporate ROI exceeds the incremental cost of capital) either dispossess the stockholder by placing his interests further behind a greater amount of unnecessary debt, or requires someone else, like the taxpayer, to pick up the bill without his consent."

● **The risks.** The inherent risks in deciding to electrify were identified by Michon as:

—Technological, the possibility that after having set up to pump juice all over the countryside a cheaper black box is developed which makes electrification obsolete.

—Surrounding energy economy and its supply/demand/price implications with the expected cost of energy a primary concern and the low ROIs now developing in the utility industry a possible portent of higher rates for electricity.

—Changes in hardware prices.

Rather than "electrification studies," said Michon, there should be "energy and motive power studies seeking to identify the most economic combinations of these two elements. Improvements in strength of materials brought about by the era of aerospace, the state of the art now achieved in turbine technology, the giant strides in energy conversion processes which the energy crisis itself portends raises the question of whether the options worthy of study should be limited simply to diesel or electric motive power."

Blair A. Ross, assistant vice president-fuel supply, American Electric Power, reported that "the electric utility industry is ready to help our railroads make a substantial contribution toward meeting our national goal of energy independence through electrification." However, he added, "because the electric power system could well become the primary source of energy for railroad operations on North America's heavy traffic main lines, future availability of electric energy must be considered as part of any electrification evaluation."

With estimates that the current $100-billion electric utility plant will have to be doubled before 1985 and quadrupled before 2000, said Ross, "it is evident that electric utilities must resolve both fuel supply and significant system facility problems to meet our nation's electric energy needs." Like railroads, utilities' problems are increasingly coming to the attention of legislative bodies, regulatory agencies and the public.

● **Only oil and gas.** Ross pointed out that the energy shortage is confined only to oil and natural gas and, because of the slow development of the breeder reactor, coal, rather than nuclear sources, will have to be the main source of power for the remainder of this century. While the coal market promises to be very tight in the short range, the long-term prospects are bright. Despite recent rises in the cost of electric power, "price stability will come about as a result of increasing use of coal and nuclear generated energy."

"The domestic resource base simply does not exist to support significantly increased domestic oil production," Ross concluded, "and the political and economic factors which are today causing oil imports to be a costly and unreliable energy source are likely to remain with us for decades. The railroads by electrification can assist our nation in moving toward our goal of energy self-sufficiency, while at the same time deriving better control of their costs and improving their operating efficiency." ■

UNITY introduces a new addition to its service-proven products line

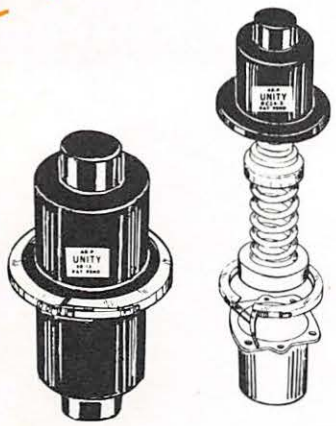
NEW

AIR BRAKE SHIPPING CONTAINERS AND COVERS

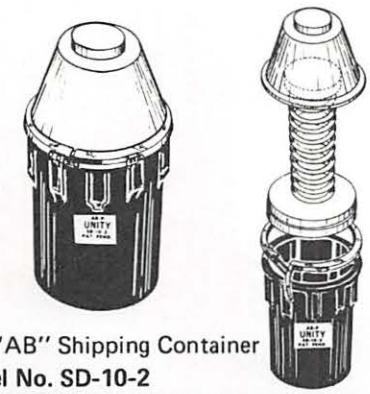
ADVANTAGES:

1. Special all-weather high-strength plastic resin material having excellent impact resistance that will not dent or deform as metal does under impact.
2. No bolts, nuts, special tools or fasteners required.
3. Versatile. Quick and simple hand-operated, double-lock retaining ring.
4. Light weight and ease of handling means lower freight costs.
5. Does not rust or require painting. Not affected by oils grease or chemicals.
6. Complete protection from dust, dirt, etc. during storage.

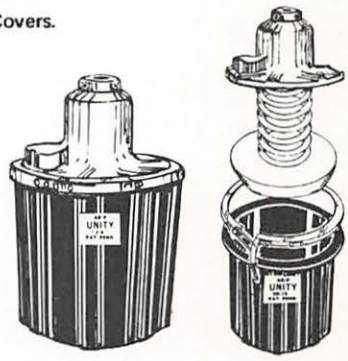
UNITY also supplies ABS, ABC & ABD Valve Shipping Covers.



Truck Mounted "AB" Piston Brake Cylinder Shipping Container
Sizes – 6½", 7½" & 8½"
Model No. SCC-6-3

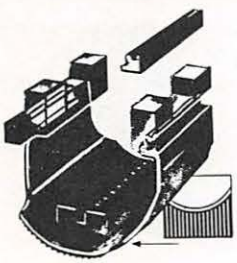


10" "AB" Shipping Container
Model No. SD-10-2

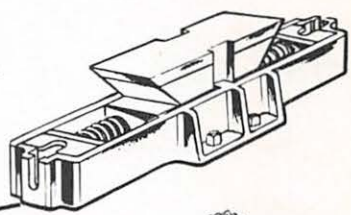


12" "UAHS" Brake Cylinder Shipping Container
Model No. SD-12

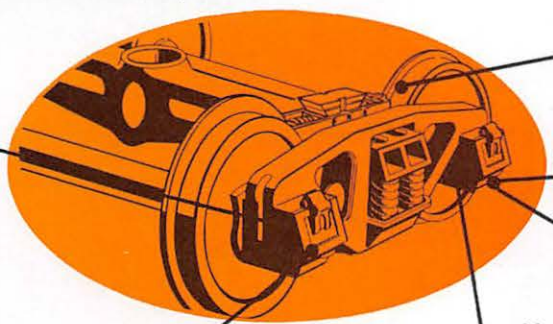
SERVICE-PROVEN TRUCK NEEDS . . . WHEN YOU NEED THEM

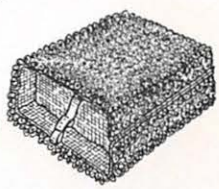


NO-SWAY SIDE BEARING STABILIZER: Reduces damage to cars and lading. Constant contact feature helps reduce wheel flange, truck component and center plate wear. Successfully tested and proven on 24 railroads, and now operating in continuous service. Over 5,000 car sets sold.



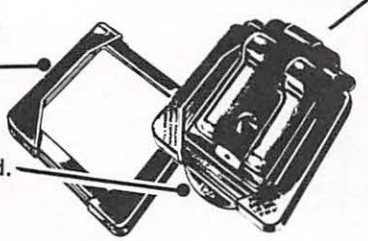
INSERT JOURNAL STOP: For use in rib or nonrib type. No welding required.



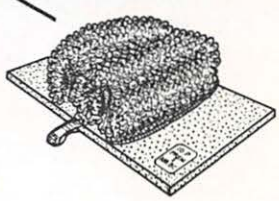


ATLAS Lubricator
Model No. 5

SNAP-ON EASY-PLY LID SEAL: Improved-double seals journal box lids. Union Spring Lid. With or without **UNITY** Lid Seals.



JOURNAL BOX REAR SEAL: Flexible inner lip affords sealing on turned down dust guard seats. Metal insert affords ease of application.



PREMIER Lubricator
Model No. 8

MEMBER RPI RAILWAY PROGRESS INSTITUTE

Unity **RAILWAY SUPPLY CO., INC.**

332 S. MICHIGAN AVENUE • PHONE 312-939-3438
CHICAGO, ILLINOIS 60604

Circle 16 on Reader Service Card

How to solve America's transportation crisis:

Start with 16,600 miles of track, 2,400 locomotives, 11,000 trailers and 140,000 freight cars.

THE FAMILY LINES SYSTEM, made up of the Seaboard Coast Line, Louisville & Nashville, Clinchfield, Georgia and West Point Route railroads, is the third largest rail network in this country.

But today, that's more than a corporate position.

Because diesel fuel is at a premium, both in expense and supply. And the cost of moving freight is rising drastically.

Yet more people need more goods delivered. Right now. And THE FAMILY LINES SYSTEM is ready with an immediate solution.

Altogether, we serve 13 of the fastest growing states in the nation with 65 million consumers.

So the size and resources of our rail system are more vital logistically and economically than ever before. Especially since railroads require only a third of the amount of fuel consumed by other land modes of freight transportation.

Solving the nation's transportation problems isn't as simple as calling THE FAMILY LINES SYSTEM.

But with fuel, time and money at stake, it's a good place to start.

THE FAMILY LINES SYSTEM

SCL/L&N
GEORGIA • CLINCHFIELD
WEST POINT ROUTE

Circle 17 on Reader Service Card

Other ways to make things happen right with Canton...

Canton provides for the business and industrial community in many ways, with clients ranging from small companies to NYSE corporations.

PUBLIC WAREHOUSING

Take Canton's Warehouse Company, for example. Over 1,000,000 square feet of sprinklered, ADT-protected space in strategically-located warehouses, providing competitively-priced storage for all kinds of products. Computerized inventory control is available to our clients, assuring them of the best all-around protection possible!

In Baltimore, Maryland, Canton has expanded its public warehouse space almost yearly for the past five years. The Canton Railroad serves the warehouse company directly and connects with the Penn Central, C&O-B&O and Western Maryland Railroads. Excellent access to major expressways, to Baltimore's deep water port, and to the Baltimore-Washington International Airport makes the warehouses readily accessible not only to major cities in the United States, but also to locations throughout the world.

Canton's Mobile, Alabama operation, in the Mobile Aerospace and Industrial Complex, is also strategically located in the hub of air, land and sea transportation facilities. Additional warehousing opportunities are being investigated in Boston, Philadelphia, Memphis and Portland, Maine.

REAL ESTATE

One of our major accomplishments in real estate has been the industrial development of Canton Center, on 150 acres of land in Baltimore City and Baltimore County. Our experience in operating the Center has been invaluable in advising clients on how to best handle their holdings, and to provide them with qualified buying, selling, leasing, financing and construction services.

We also own and manage a garden-type, 192-unit apartment complex in Youngstown, Ohio, and are actively investigating industrial development in other parts of the country.

TERMINAL OPERATION

Cottman Company, another Canton subsidiary, has served prominent shipping firms for over half-a-century. First to build a complete container facility in Baltimore, Cottman has served as the facility's terminal operator since the inception of the service. Cottman was also instrumental in providing the first fully "roll-on, roll-off" service in the Port of Baltimore. In addition, the company developed a sophisticated perishable fruit operation, a quick and efficient process utilizing the finest conveyor equipment available.

Cottman's other activities in bulk stevedoring allow for utmost diversification in cargo handling. With one of the largest Bulk Terminals on tidewater, equipped with the most modern of cargo handling machinery, and the expertise required to handle all types of cargos, regardless of size, the Cottman Company *is* stevedoring in Baltimore.

At present, Cottman is exploring other areas of the country, particularly the Southwest, for suitable facilities of its own, or in cooperation with others.

CONSULTING

For years, businesses throughout the country have sought advice from Canton management on transportation, distribution and related areas such as real estate and insurance. Experience and technology are the prime factors in Canton's ability to offer these services.

Why not let the skills, resources and applied knowledge of a multi-faceted company make things happen for you! It's your move. Write or call collect for informative brochure or detailed information.

CANTON COMPANY

SINCE 1829

Canton House P.O. Box 447
Baltimore Maryland 21203
Telephone (301) 837-7733

Start with 16,600 miles of track, 2,400 locomotives, 11,000 trailers and 140,000 freight cars.

THE FAMILY LINES SYSTEM, made up of the Seaboard Coast Line, Louisville & Nashville, Clinchfield, Georgia and West Point Route railroads, is the third largest rail network in this country.

But today, that's more than a corporate position.

Because diesel fuel is at a premium, both in expense and supply. And the cost of moving freight is rising drastically.

Yet more people need more goods delivered. Right now. And THE FAMILY LINES SYSTEM is ready with an immediate solution.

Altogether, we serve 13 of the fastest growing states in the nation with 65 million consumers.

So the size and resources of our rail system are more vital logistically and economically than ever before. Especially since railroads require only a third of the amount of fuel consumed by other land modes of freight transportation.

Solving the nation's transportation problems isn't as simple as calling THE FAMILY LINES SYSTEM.

But with fuel, time and money at stake, it's a good place to start.

THE FAMILY LINES SYSTEM

SCL/L&N
GEORGIA • CLINCHFIELD
WEST POINT ROUTE

Circle 17 on Reader Service Card

GRAVITY GATES AVAILABLE NOW

Holland Company has a limited stock of **13"x42" Shur-Seal gravity gates,** rack-and-pinion type, available right now. These gates fit all ACF bolt-on applications and are ideal for replacement requirements.

Also, we are contemplating a production run of **24"x30" weld-on gravity gates** which would be universal to both old and new P.S. work points. However, our schedule for 24x30's depends on your response.

If there's enough demand to make a production run of 24"x30"s gates feasible, we'll produce them and you'll have your gates **within 30-60 days.**

Frozen price for all gates, regardless of quantity, F.O.B., Aurora, IL. Terms 1%, 10 days, net 30.

HOLLAND COMPANY
Freight Equipment Div.
747 E. Roosevelt Road
Lombard, IL 60148
(312) 629-8500

Circle 18 on Reader Service Card

Call **PICK**
Before You Pack
FOR
Washington, D.C.

Enjoy real money-saving value, and relax at the

PICK LEE HOUSE
15th and "L" Streets, N.W.
202/347-4800

4 Blocks from the White House

- Beautifully redecorated and newly furnished
- Color TV in every room
- Restaurant & Lounge
- Meeting facilities for up to 45
- Sightseeing Tours
- Family Plan

ALBERT PICK HOTELS MOTOR INNS

ALL AT MODERATE RATES

RESERVATIONS:
CALL TOLL FREE
800-621-4404
In Illinois: 800-972-7200

Circle 19 on Reader Service Card

Coal hauling has a bright future

Coal makes up 88% of the proven fuel resources in the United States—and of all that coal, almost half of it (or an estimated 1.3 trillion tons) lies in three states, Wyoming, North Dakota and Montana. It can be mined relatively cheaply and delivered relatively cheaply by unit train to areas deficient in coal. And all of this makes the future look pretty bright to Burlington Northern and other roads operating in the coal-rich parts of the West. The figures:

—BN forecasters had originally estimated 1974 coal revenues at $103.4 million. Now, the estimate is $115 million this year and $135 million to $140 million in '75—and $200 million is not regarded as out of reach for 1976. Currently, the forecasters are looking toward $330 million from coal in 1982.

—Two major projects involving rail/water coal movement may alone involve transportation of 30 million tons a year. One will be a rail/barge move, with the transloading to be handled at a new dock near St. Louis. By 1980, coal deliveries to the dock may hit 20 million tons annually. The second project will have its rail/water transfer in the Duluth-Superior area. On this one, Detroit Edison has a contract for a half-million tons of coal this year, a million tons next year, five million tons in 1976 and 10 million tons a year beginning in 1978. Now, the coal will be loaded over BN's iron ore docks into conventional vessels; eventually, the operation will make use of a new dock and self-unloading, 40,000-ton-capacity vessels. In both locations, St. Louis and Duluth-Superior, provision of extensive storage areas will enable rail and water operations to work independent of each other.

—Jointly with Chicago & North Western, BN will be building the longest piece of railroad laid down in the U.S. since 1931, a 105-mile line in Wyoming. This line will tap coal reserves estimated at eight billion tons in the Gillette coal field where at least seven major mines are scheduled to open.

BN's George R. Powe, assistant vice president-commodity marketing, gave these figures—and more—to the '74 American Mining Congress earlier this month in Pittsburgh: For instance, 44% of oil-fired power generating capacity could be converted to coal within a year. For instance, low-sulphur western coal can be delivered into Appalachia for about 60 cents per million Btu's, and that's a figure "that soon may be competitive with low-sulphur eastern coal." What do all the figures add up to? Sound reason for optimism for western coal-haulers.

One picture can't do us justice.

That's why we'll gladly send you our brochure with 29 Grand Hotel pictures and 2 maps in Point Clear color. You'll see that while we may be off the beaten path, we're well worth getting to. An unspoiled setting with a challenge every golfer should face at least once in a lifetime. Our 3 championship nines with 27 beautiful holes. Outstanding! Surrounded with enough other sports and activities to lure even the most dedicated golfer from the greens.

We offer 500 wooded acres, bay, beach and pool in season, sailing, water skiing, tennis, horseback riding, skeet and trap shooting, quail hunting, deep-sea and freshwater fishing. All with very Grand Hotel accommodations, food, hospitality.

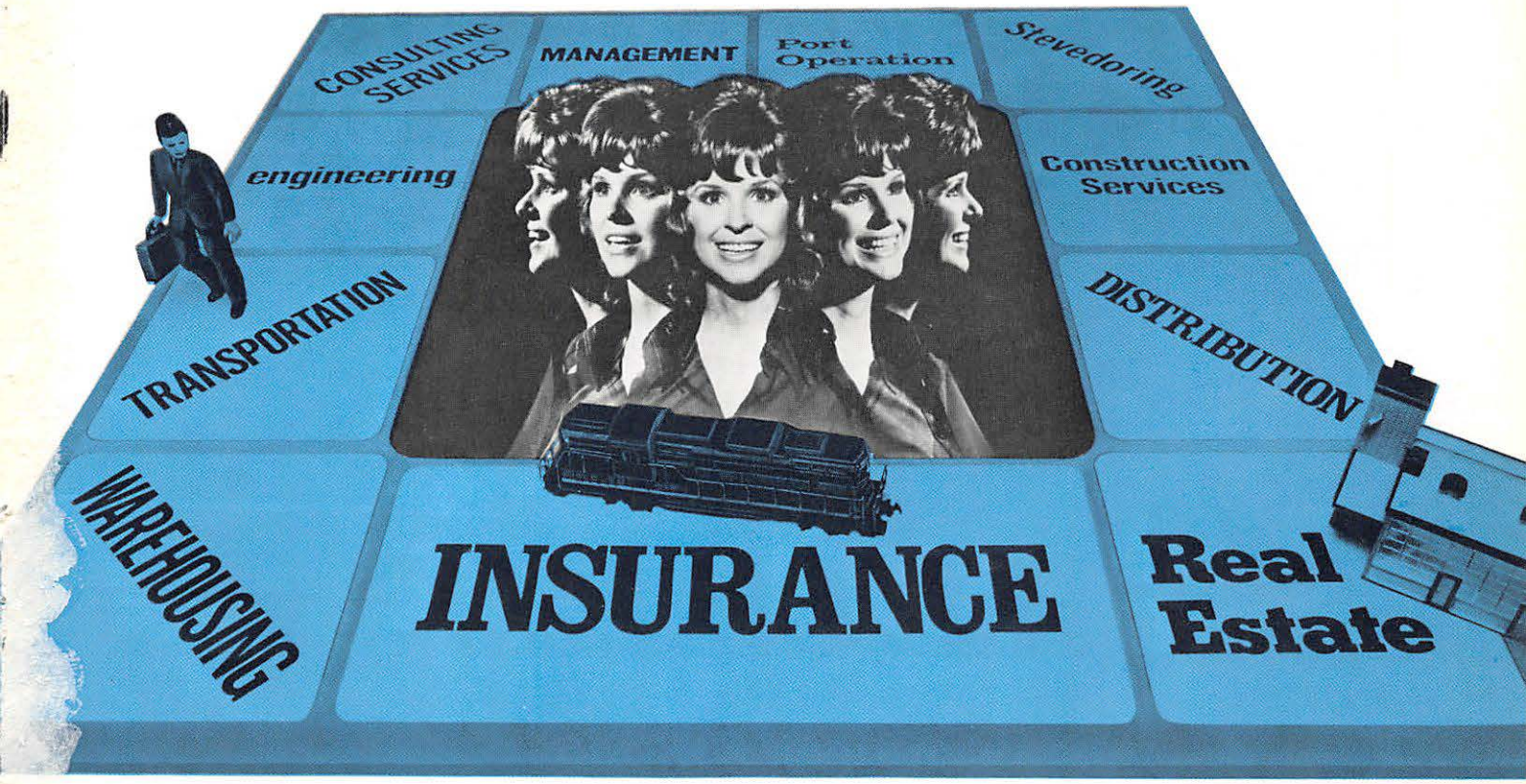
GRAND HOTEL
Point Clear
ALABAMA
THE FOUR SEASON RESORT ON BEAUTIFUL MOBILE BAY

Grand choice of golf, tennis and family plans 10 months of the year. All-inclusive with room, 2 meals, gratuities, tennis, unlimited free golf and much more. See your travel agent or write: Jim Pope, V.P. & Gen. Mgr., Box 55, Grand Hotel, Point Clear, Ala. 36564. Tel. (205) 928-9201. Planning a meeting? Send for our Grand Conference Brochure.

Circle 20 on Reader Service Card

Things happen right... when you cover your "moves" through CAI

(A Canton Company providing creative answers to today's business problems)



Canton Agency, Inc., commercial insurance agents and brokers, offers a comprehensive line of insurance to business and industry. But its real specialty is prompt, efficient, world-wide service, plus creative answers to problems that have been nagging business for years.

For example, in December of 1971, Canton Agency introduced a "railroad master plan" designed to provide more comprehensive and stable insurance coverage for the nation's railroads. The plan, recommended by the Executive Committee of the American Short Line Railroad Association, won quick acceptance. At the present time, there are over 100 United States railroads participating.

Canton's comprehensive "railroad master plan" includes all necessary coverages such as F.E.L.A., workmen's compensation, general liability, bill-of-lading coverage (cargo legal), owned and foreign rolling stock and other miscellaneous coverages. Canton's maritime comprehensive includes longshoremen and harbor workers coverages.

The agency writes a full line of commercial and industrial insurance coverages for customers from the single proprietor to the giants listed on the NYSE, including such coverages as aircraft; inland marine; general liability; ocean cargo; package policies; fleet auto; fire and workmen's compensation.

For more information on what we can do to make things happen right for you, just mail the coupon or call collect.

CANTON AGENCY INC.

Subsidiary of Canton Company of Baltimore
Canton House P.O. Box 447
Baltimore Maryland 21203
Telephone: (301) 837-7733

Please send me additional information on your
☐ "railroad master plan" ☐ other insurance

Name _____

Title _____ Phone _____

Firm _____

Address _____

City _____ State _____ Zip _____

Other ways to make things happen right with Canton...

Canton provides for the business and industrial community in many ways, with clients ranging from small companies to NYSE corporations.

PUBLIC WAREHOUSING

Take Canton's Warehouse Company, for example. Over 1,000,000 square feet of sprinklered, ADT-protected space in strategically-located warehouses, providing competitively-priced storage for all kinds of products. Computerized inventory control is available to our clients, assuring them of the best all-around protection possible!

In Baltimore, Maryland, Canton has expanded its public warehouse space almost yearly for the past five years. The Canton Railroad serves the warehouse company directly and connects with the Penn Central, C&O-B&O and Western Maryland Railroads. Excellent access to major expressways, to Baltimore's deep water port, and to the Baltimore-Washington International Airport makes the warehouses readily accessible not only to major cities in the United States, but also to locations throughout the world.

Canton's Mobile, Alabama operation, in the Mobile Aerospace and Industrial Complex, is also strategically located in the hub of air, land and sea transportation facilities. Additional warehousing opportunities are being investigated in Boston, Philadelphia, Memphis and Portland, Maine.

REAL ESTATE

One of our major accomplishments in real estate has been the industrial development of Canton Center, on 150 acres of land in Baltimore City and Baltimore County. Our experience in operating the Center has been invaluable in advising clients on how to best handle their holdings, and to provide them with qualified buying, selling, leasing, financing and construction services.

We also own and manage a garden-type, 192-unit apartment complex in Youngstown, Ohio, and are actively investigating industrial development in other parts of the country.

TERMINAL OPERATION

Cottman Company, another Canton subsidiary, has served prominent shipping firms for over half-a-century. First to build a complete container facility in Baltimore, Cottman has served as the facility's terminal operator since the inception of the service. Cottman was also instrumental in providing the first fully "roll-on, roll-off" service in the Port of Baltimore. In addition, the company developed a sophisticated perishable fruit operation, a quick and efficient process utilizing the finest conveyor equipment available.

Cottman's other activities in bulk stevedoring allow for utmost diversification in cargo handling. With one of the largest Bulk Terminals on tidewater, equipped with the most modern of cargo handling machinery, and the expertise required to handle all types of cargos, regardless of size, the Cottman Company *is* stevedoring in Baltimore.

At present, Cottman is exploring other areas of the country, particularly the Southwest, for suitable facilities of its own, or in cooperation with others.

CONSULTING

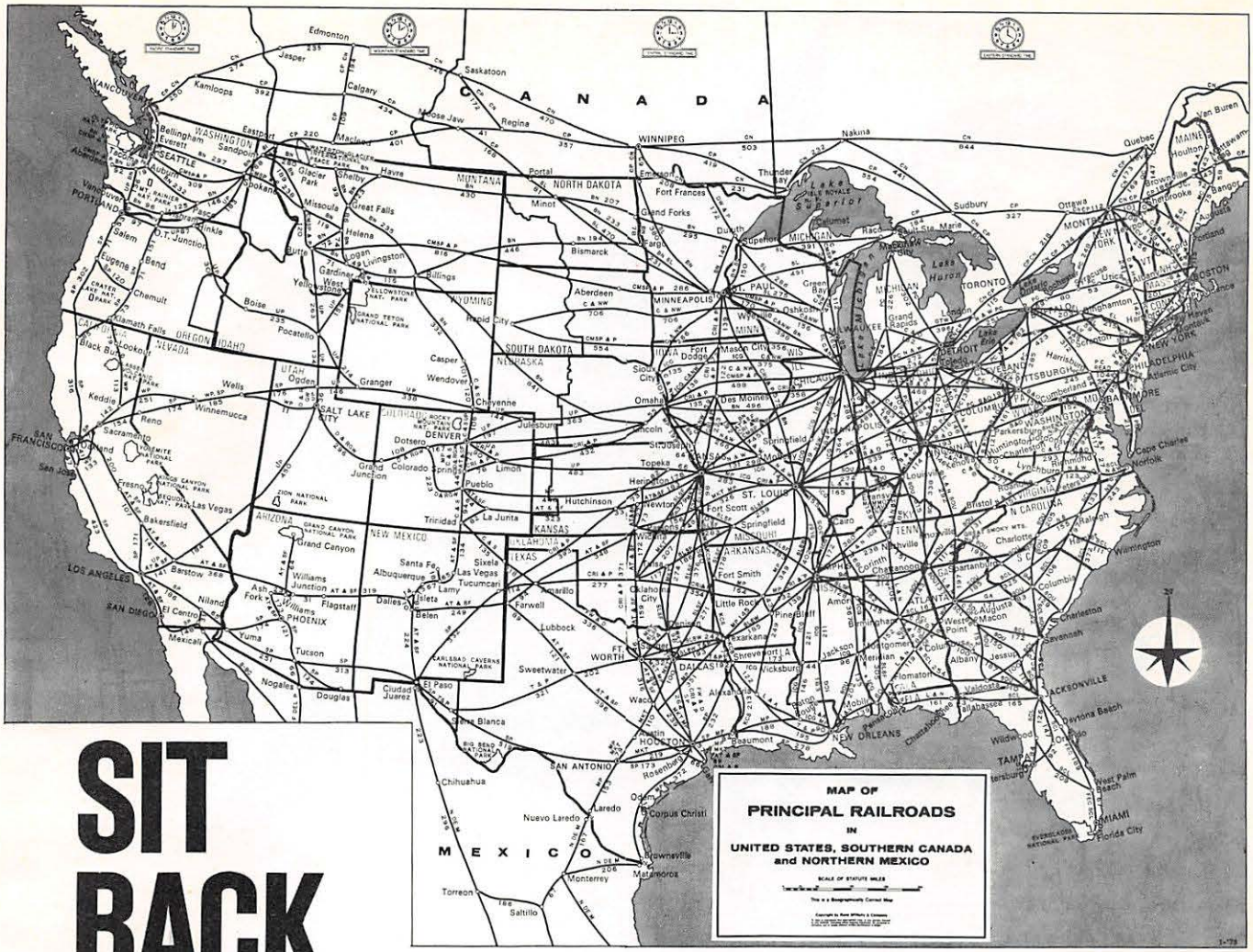
For years, businesses throughout the country have sought advice from Canton management on transportation, distribution and related areas such as real estate and insurance. Experience and technology are the prime factors in Canton's ability to offer these services.

Why not let the skills, resources and applied knowledge of a multi-faceted company make things happen for you! It's your move. Write or call collect for informative brochure or detailed information.

CANTON COMPANY

SINCE 1829

Canton House P.O. Box 447
Baltimore Maryland 21203
Telephone (301) 837-7733



SIT BACK...

and see every PRINCIPAL RAILROAD LINE in the U.S., Southern Canada and Northern Mexico.

Designed for your office wall. . the newly revised wall map of Principal Railroads by Rand McNally. It will make your decisions easier, quicker and more precise. It comes in two sizes—48" x 33" and 66" x 46"—both on heavy duty paper for long life.

The map can be your major visual planning tool letting you pinpoint any of over 200,000 miles of line instantly. . .and with professional accuracy.

You can even color code lines of special interest to you. . .and add changes being made each day. Order yours today. 48" x 33" map. . .$8; 66" x 46" map. . . $12. (Shipped in heavy tubing).

MAIL TO:

F.C. Osthoff

Simmons-Boardman Publishing Corp, 350 Broadway, N.Y., N.Y. 10013

(COUPON)

Please send me____ 48" x 33" Rand McNally map(s) at $8. each (plus $2 handling, shipping and insurance)

Please send me____ 66" x 46" Rand McNally map(s) at $12. each (plus $2 handling, shipping and insurance)

Please send me____ 1973 Handy Rand McNally Railroad Atlas consisting of 60 pages of 2-color spreads. (Not shown in ad). Only $3.45 each plus .50¢ shipping.

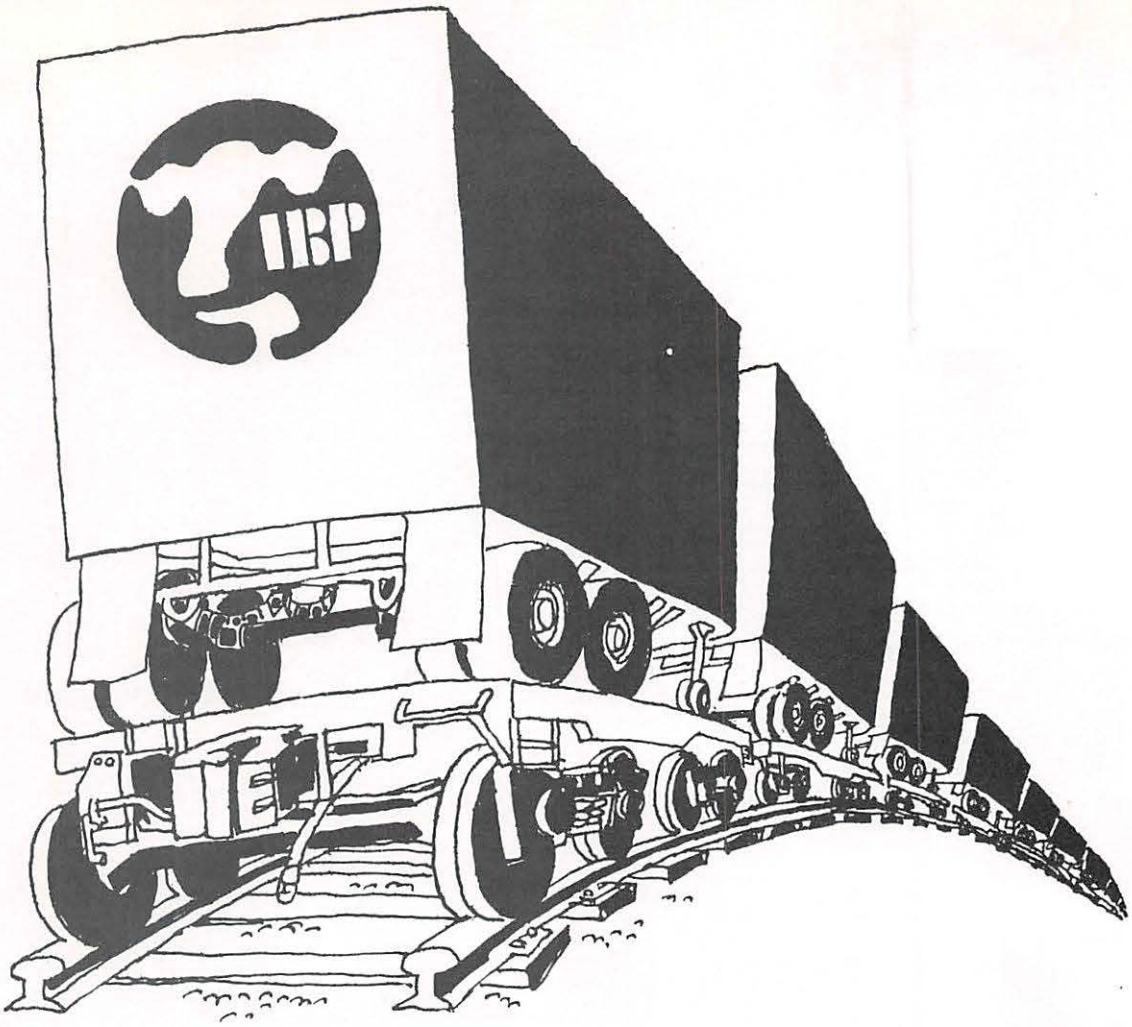
I enclose $____ in check or M.O.

Name _____ Company _____

Address _____

City _____ St. _____ Zip _____

(Allow 2 to 3 weeks delivery)



got a beef about transportation costs? switch to the Illinois Central Gulf!

When one of the world's largest meat processors wanted to beef up its transportation, recently, they made a surprising move.

In spite of the fact that Iowa Beef Processors owned their own trucking business, they invested in a fleet of refrigerated piggy-back trailers to ship on the ICG.

"We needed to depend on getting to Chicago overnight, and the railroad is consistent!" says Dick Loose, their traffic manager.

And, according to Jack Roeser, Iowa Beef's Group VP as well as member of the National Council on Physical Distribution, "When you think of the future—saving fuel, economy, and service—everything points to greater use of the railroad."

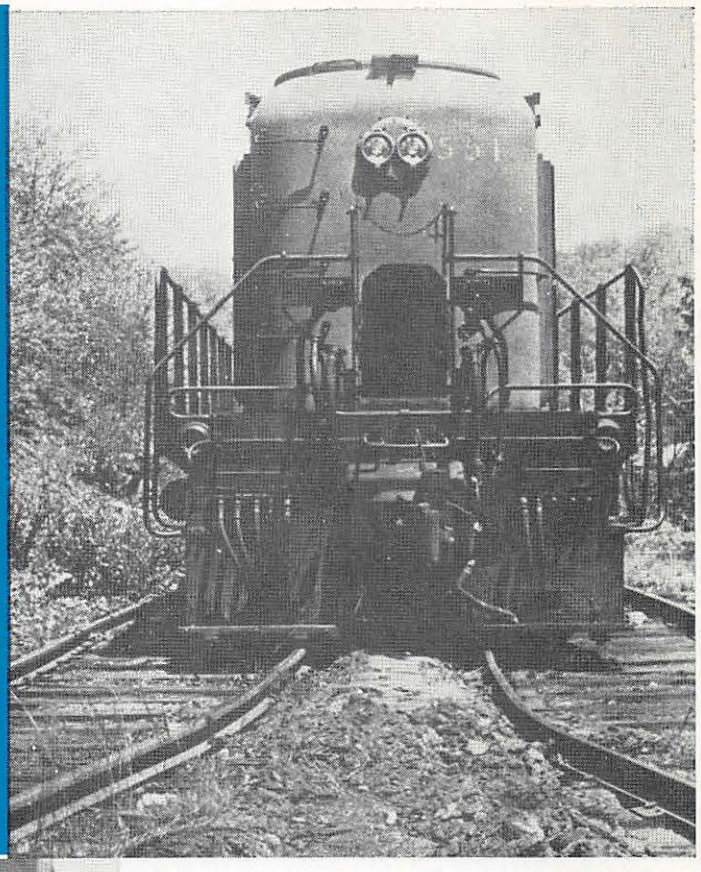
So now when Iowa Beef heads out of Fort Dodge, Dakota City, Denison, and Sioux Falls, it's heading on the ICG. After all, there's a lot at steak, so to speak.

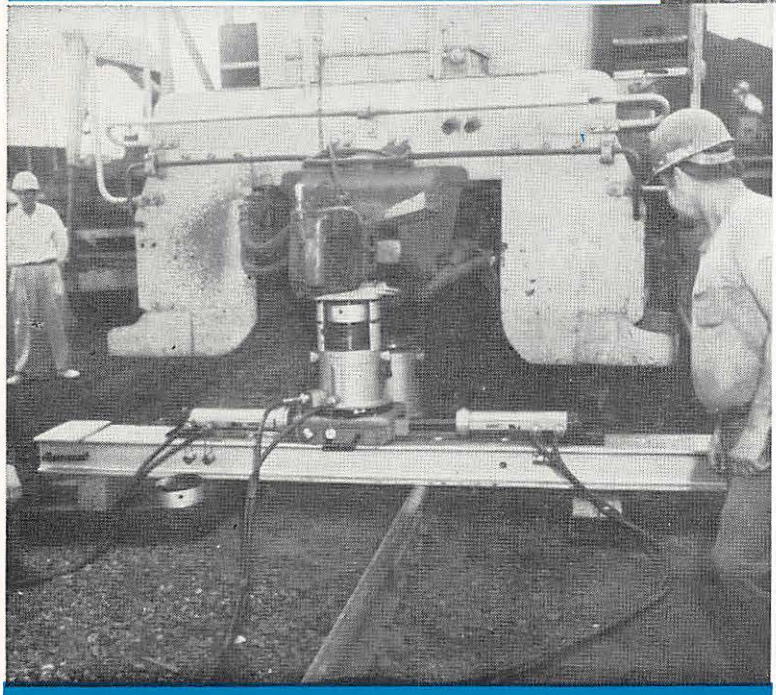
To take the bull by the horns and cut your transportation costs, call us at 312-565-1600 Ext. 2272 and ask for George Stern.

ILLINOIS CENTRAL GULF
AN IC INDUSTRIES COMPANY
We've been working on the railroad

? Which Direction

No doubt about it— a derailment is a calamity. The most practical and economical way to get the re-railing job done is the Hoesch System, shown below. Now used the World over.





132-ton capacity hydraulic jack can easily raise locomotives or cars. It weighs only 152 lb., hence can be positioned by hand. The 7.5 ft. long traverse beam weighs 194 lb. and also can be positioned by hand. In this application, the multi-stage jack is making a coupler lift, resting on roller carriage and traverse beam. Once it raises the locomotive so the wheels are above the rail, hydraulic displacing jacks move the locomotive sideways and back on to the rail.

Derailments are a calamity. Even when the damage is minor, it disrupts service. Getting to the derailment is crucial. So is setting up for re-railing.

Put all these problems together—and in 90% of the cases the Hoesch re-railing system is the fastest, easiest, and most efficient for the wide variety of conditions that come up. Even the one shown here.

The crew, jacks, hydraulic power unit, controls, beams and the blocking bracing can be carried on one truck or hi-rail unit—to get to the job fast. All components can be carried and positioned by hand. All men are clear of re-railing. On most locomotive derailments one end can be handled in 30 minutes from time of arrival with a trained crew.

Ask the roads* using Hoesch if they would go back to the old methods.

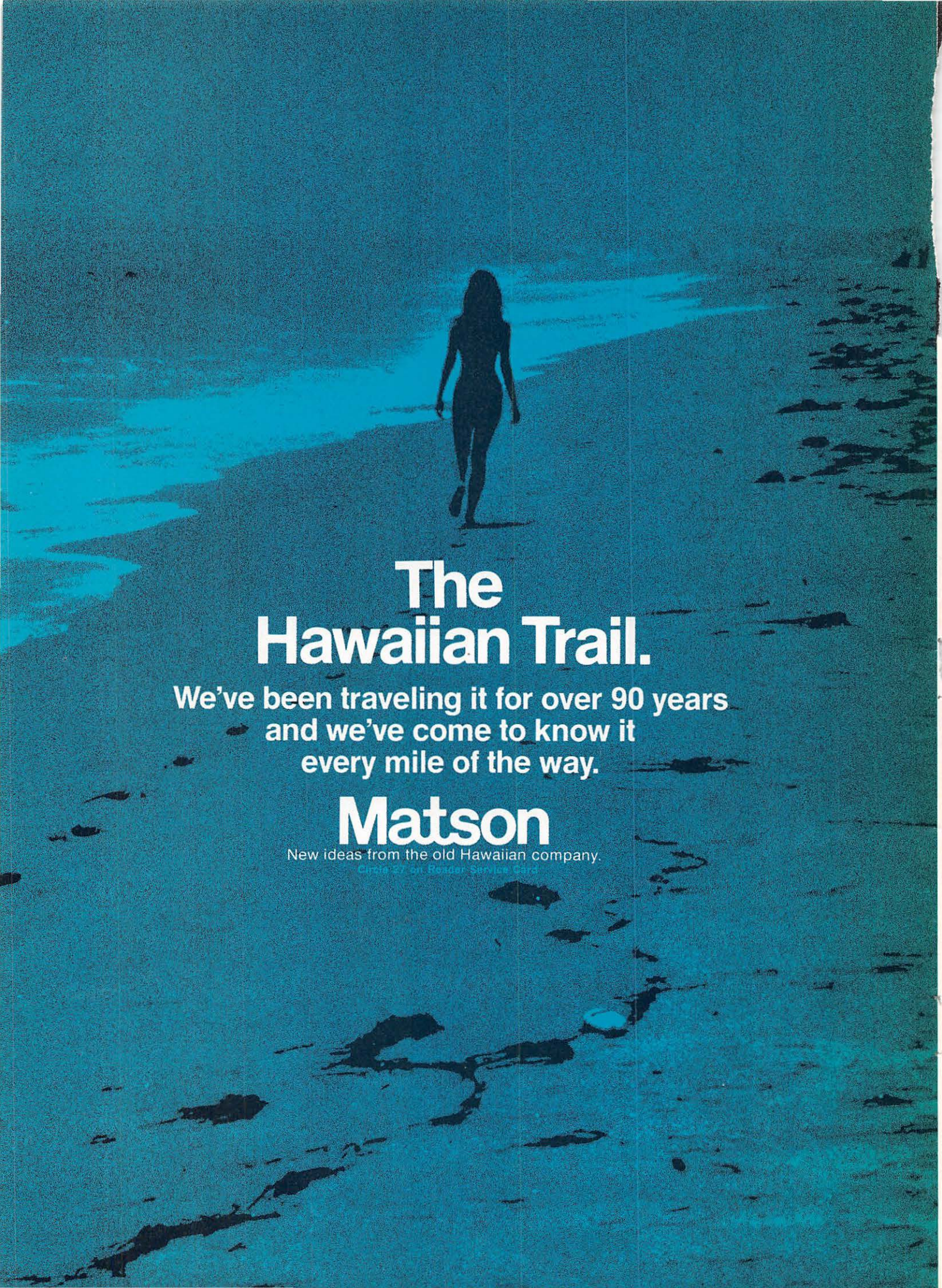
* names on request

Hoesch also manufactures: Hydraulic wheel presses ■ Pit-type wheel lathes ■ Numerical wheel set measuring stands ■ Heavy-duty wheel lathes ■ Journal turning and grinding machines ■ Turn-tables and transfer bridges

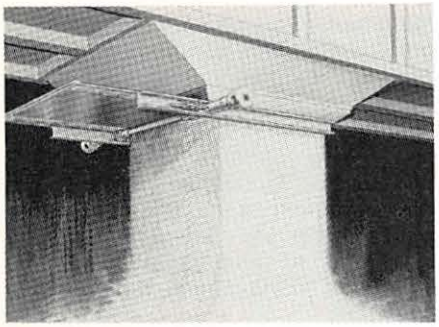
HOESCH AMERICA, INC.

225 Peachtree St., N.E. Atlanta, Georgia 30303 (404) 688-9171

Circle 22 on Reader Service Card


The
Hawaiian Trail.
We've been traveling it for over 90 years
and we've come to know it
every mile of the way.
Matson
New ideas from the old Hawaiian company.
Circle 27 on Reader Service Card

New Products Report



Discharge gate has tight curved seal

W.H. Miner Division's discharge gate for covered hopper cars incorporates new welding and manufacturing techniques for added strength while retaining the rack-and-pinion design for operation. The curved gate seal with positive bolt-action lock is standard. This lightweight unit with 24- by 30-inch opening fits standard compartments and will unload grain, chemicals and other dry bulk commodities.

Circle 60 on reader service card

Reinforced panels protect new automobiles

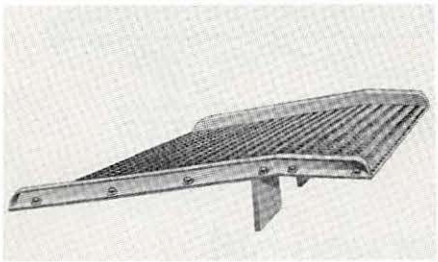
Alsynite/Structoglas fiberglass-reinforced side panels are now protecting new automobiles being handled on multi-level rack cars. The strength-to-weight ratio of this Reichhold material, while not adding substantially to the weight of the car, insures the panels will resist thrown objects and pellets. The transluscence of the panels makes it easy to spot thieves behind them and also passes light to simplify nighttime loading and unloading operations. Rather than being bolted to cars, the panels are strapped in place and their flexibility allows them to sustain the torque action of the long cars.

Circle 61 on reader service card

No combination or keys needed for door locking device

Designed for application to single or double sliding and plug type rail car doors and to doors of truck trailers, the "Sure-Safe" anti-theft lock requires neither a combination nor keys. The design of the R.W. Mac Co. device calls for it to be welded to the car side sill so that a securement pin protrudes through a hole burned in the horizontal surface of the car door track. The door remains locked until a timer (with a 2-hr. maximum timing), is wound to a pre-determined time at the receiver's dock. When the timer winds down, an alarm goes off and the locking pin disengages from the door track allowing the door to be opened. If the door is not opened in five minutes, the device locks again automatically.

Circle 62 on reader service card



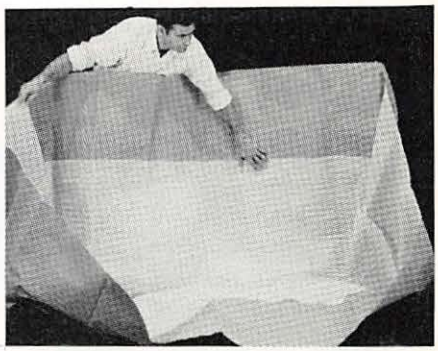
Dockplates give closer, safer fit between dock and carrier

What is said to be the only curbed dockplate on the market with safety legs formed to an 81-deg. angle to immobilize the plate and give a closer, safer fit between dock and carrier is available from Rampmaster, Inc. The 3-in. curbs are painted a bright safety yellow and extend the full length of the plate to deter run-offs. All the company's dockplates have a standard 11-in. lip, but the steel locking legs—bolted to the dockplate with four countersunk machine bolts—can be reversed easily to provide a 14-in. lip for use with rail cars and refrigerated trucks. They are built with a non-sparking safety treadplate deck to provide virtually non-skid surface in all kinds of weather. Rampmaster curbed plates are available in two standard series: CDP for axle loads up to 10,000 lb, and CHDP for axle loads up to 12,200 lb.

Circle 63 on reader service card

Prefabricated furniture covers cut costs, reduce damage

Portopak prefabricated overstuffed furniture covers cut costs and reduce damage by eliminating cartons and wood skids in rail shipping when couches and davenports are shipped on end to conserve space. Portopak covers, from Portco Corp., fully protect all corners. They are constructed of heavy-



weight reinforced kraft paper laminated to a blanket of Du Pont's non-abrasive Microfoam. The non-staining wrap is available in rolls and individual units.

Circle 64 on reader service card

NEW LITERATURE

LOADING PROCEDURES. Two revised publications have been issued by the Freight Loading and Container Section of the AAR: Pamphlet No. 23—"Rules Governing the Loading of Steel Products in Closed Cars and Protection of Equipment," and General Information Series No. 546—"Loading of Furniture in Closed Cars and Protection of Equipment." Cost of Pamphlet No. 23 is 40 cents; G.I.S. No. 546 costs 35 cents; reduced prices are available for volume orders.

Circle 70 on reader service card

TELECOMMUNICATIONS. A Telecommunications Products Catalog has been issued by GTE Lenkurt Inc. which describes every major product in the company's broad line of video, voice and data transmission systems.

Circle 71 on reader service card

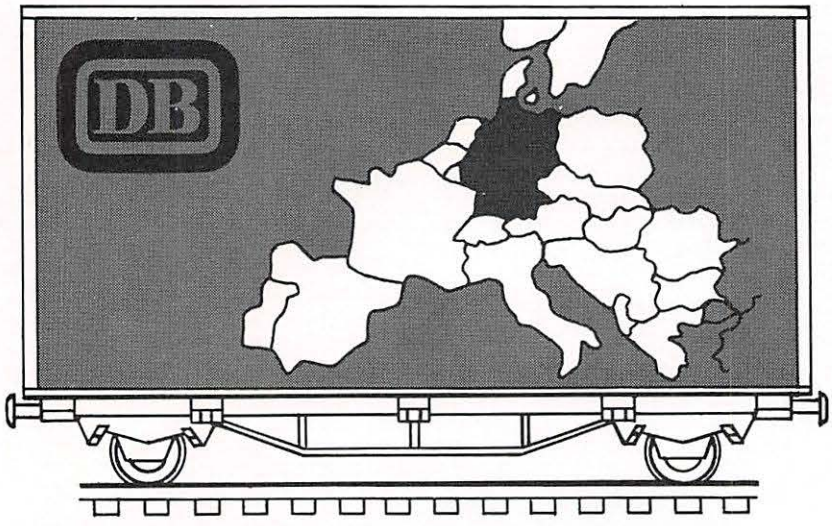
FIBER BEARINGS. A complete kit of information about bearings made from Teflon TFE fluorocarbon fiber is available from E.I. du Pont de Nemours & Co. Included are bearing manufacturers' catalogs, technical and performance data, case histories of bearings in a diversity of uses, and reprints of pertinent articles.

Circle 72 on reader service card

WEBBING SLINGS. An expanded line of webbing slings for a wide range of materials handling applications and conforming to OSHA specifications is available from Liftex Slings, Inc.

Circle 73 on reader service card

Shipping cargo to Germany
...and to the rest of Europe?



We'll pick you up where the others let you off!

GERMANRAIL-

dependable, economical, efficient rail freight, container, cargo, and door-to-door service.

PICK-UPS ANYWHERE! We'll pick up your cargo anywhere. At sidings in every seaport in Germany. And anywhere in Europe.

DELIVERIES EVERYWHERE! We'll deliver your cargo everywhere. To more than 10,000 industrial sidings, on more than 13,000 freight trains every day, with overnight service to all regions of Germany. And door-to-door service for your cargo, including all sizes of containers.

ANYTIME—AND ON TIME
...WHERE THE TRAINS
STILL RUN ON TIME

OUR JOB IS TO HELP YOU—The freight forwarder, the traffic manager, every shipper at every company, airline and steamship line.

CONTACT GERMANRAIL—For information on rates, schedules, door-to-door service—any shipping problem you may have, any details you may require about freight and cargo transport in Germany and the rest of Europe. Just one phone call—if we can't give you your answer immediately, we'll Telex our overseas offices and get right back to you.

GERMAN FEDERAL RAILROAD
11 W. 42nd St., N.Y., N.Y. 10036
Phone (212) 565-7545

TIA aims at rate flexibility

Most Transportation Week speakers were preoccupied with northeastern railroad problems to the exclusion of nearly everything else. But at least one of them—Robert Henri Binder, assistant secretary of transportation for policy, plans and international affairs—addressed himself to the "problem" of the healthy railroads. The problem, said Binder, is to keep them healthy—to keep the northeastern disease from spreading.

DOT's main thrust in this direction, Binder told a Transportation Seminar at St. Anselm's College, Manchester, N.H., on May 14, is the Transportation Act of 1974. He had this to say about the rate-making provision of the bill:

"A cornerstone. . .is improvement in the ratemaking system. The current system of rate regulation severely limits an individual railroad's freedom to establish rates. As a consequence, it has created serious rigidity and distortions in the railroad rate structure. . .The TIA would provide that a rate decrease may not be found unlawful on the ground that it is unjustly or unreasonably low unless it is below variable cost. Under today's practice, rates may be found unlawful on the grounds that they are too low, even though the rates are compensatory. We believe this provision would encourage railroads to reduce rates on traffic where they have a cost advantage.

"The TIA would also modify the law with respect to suspension of rate changes by providing that a proposed rate increase may not be suspended as being unjustly or unreasonably high if it is below the applicable class rate. On rate decreases, the bill provides that a rate may not be suspended on the grounds that it is unreasonably or unjustly low. But other grounds for suspension that exist in the Interstate Commerce Act today would remain, and the Commission would retain full authority to declare an increase to be unreasonably high after due investigation and order escrow refunds.

"These changes in the suspension provisions of the Act should introduce more flexibility in the pricing system and allow the railroads to use seasonal pricing as well as pricing designed to spread the transportation process more evenly through the year.

"The present regulatory process has also resulted in the rates of one mode being held too high to protect another mode. The TIA would prohibit this, as long as the rate in question is not below variable cost. This provision should lead to more competitive and cost-related intermodal pricing."

Proform fiber glass roofs convert open cars to covered cars.

What can you do when you have plenty of open hopper cars, but not enough covered hoppers?

You can do what Illinois Central Gulf Railroad did.

They enlisted the support of Proform, Inc., to design and develop a portable hopper cover of fiber glass reinforced plastic.

The result: a hopper car cover that potentially turns every open car into a covered car.

Light enough so that one man with crane and slings can lift it on or off cars.

Durable enough to withstand weathering and vibration.

Rigid enough so that it's easy to install, remove and store.

For Illinois Central Gulf it means a new flexibility of use for its rolling stock.

For Proform it's another example of their capability in the innovation, engineering, design and manufacture of RP products.

PPG and Proform, Inc., are working together to bring new ideas and products to industry. For more information, write Proform, Inc., Marketing Department, 1500 East 78th St., Minneapolis, Minn. 55432. Or PPG Industries, Inc., Dept. 1154, Fiber Glass Division, One Gateway Center, Pittsburgh, Pa. 15222.

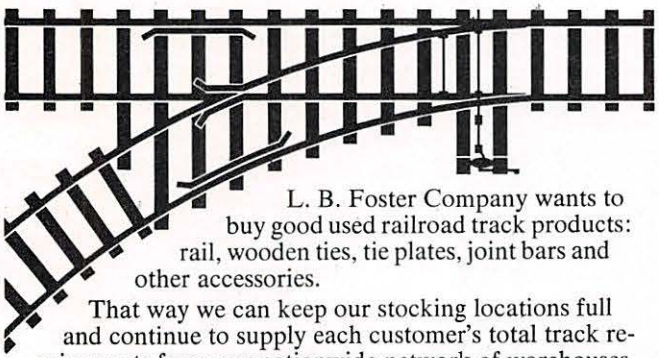
PPG: a Concern for the Future

Proform makes it.
PPG makes it possible.

Fiber Glass
PPG
INDUSTRIES

Circle 24 on Reader Service Card

Wanted: Used rail and accessories



L. B. Foster Company wants to buy good used railroad track products: rail, wooden ties, tie plates, joint bars and other accessories.

That way we can keep our stocking locations full and continue to supply each customer's total track requirements from our nationwide network of warehouses.

We're North America's leading supplier of new and used track products. So if you want to sell—or buy—contact L. B. Foster Company, Seven Parkway Center, Pittsburgh PA 15220.

FOSTER **L.B.FOSTER COMPANY**
PIPE • RAIL AND TRACK • HIGHWAY PRODUCTS
PILING • CONSTRUCTION EQUIPMENT

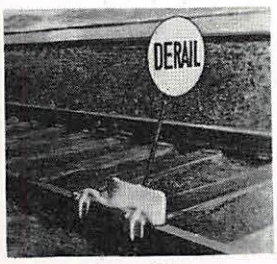
Circle 25 on Reader Service Card

Now available—

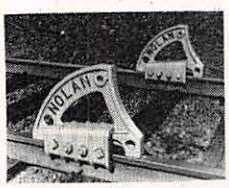
NEW CATALOG 12 ON NOLAN railroad equipment

it's all about

Tool & Supply Carts



Derails



Car Stops

and other job-tested items of interest to a profit-oriented railroad.

Catalog 12

NOLAN

THE NOLAN COMPANY Pennsylvania St. Bowerston, Ohio 44695

Circle 26 on Reader Service Card

75 YEARS AGO IN The Railway Age

Official announcement is made under date of May 1 that the Lehigh Valley Railroad will withdraw four-wheel car equipment from the trade and replace it with cars of 80,000 and 100,000 pounds' capacity. The replacement is being effected rapidly and it is expected that the substitution will be completed by July 1 of the current year.

***

Superintendent Russell of the Morris & Essex Division of the Delaware Lackawanna & Western has issued an order to employes prohibiting the use of tobacco in any form while on duty.

***

In accordance with a law passed by the last Legislature, the North Carolina Railroad Commission has notified the railroads in that State that they must provide separate coaches or compartment cars for white and colored persons by June 1.

***

The Association of Railway Telegraph Superintendents held its annual meeting at Wilmington, N.C., on May 17 and 18, with 85 delegates in attendance. A feature of the convention was a successful demonstration of Marconi's system of wireless telegraphy. Thomas A. Edison attended the convention as a guest of the association.

***

Two thousand trackmen on the Grand Trunk went out on a strike on May 22 because the management refused to accede to their demands to an increase of 25 cents a day in wages.

***

Beginning on June 1, the Denver & Rio Grande will inaugurate an a la carte dining-car service on all through trains between Denver and Ogden. The cars are all new and of the latest pattern and have all the modern improvements.

***

FORT DODGE & OMAHA.—Tracklaying was begun at Council Bluffs, Ia., this week on this road, which is an extension of the Illinois Central from Fort Dodge, Ia., to Omaha.

JACKSONVILLE & SOUTHWESTERN.—Tracklaying was begun on May 16 on this road from Jacksonville to Manatee, Fla., and it is expected to have the first 40 miles ready for operation within 90 days.

***

H.K. Porter & Co. are building three locomotives for June delivery to the Okhta Railroad of Russia. These locomotives will be 6-driver side-tank simple engines, and will weigh about 32,500 pounds in working order. Specifications call for 10 by 14 cylinders, 31-inch wagon-top boilers of 150 pounds working pressure, copper fireboxes, 50 by 19 inches, eighty-seven 1¾-inch tubes and tenders of 400 gallons water capacity, and space for the accommodation of 22 cubic feet of coal.

Train Action: what you don't know can hurt you.

We're helping tame the tremendous forces of uncontrolled train action with a proven control system. It's accomplished without sacrificing the cushioning performance required to help protect cars and lading, too.

Your FreightMaster Sales Engineer can show you how this exclusive combination will make your new or upgrade car cushioning program more economical and effective at the same time.

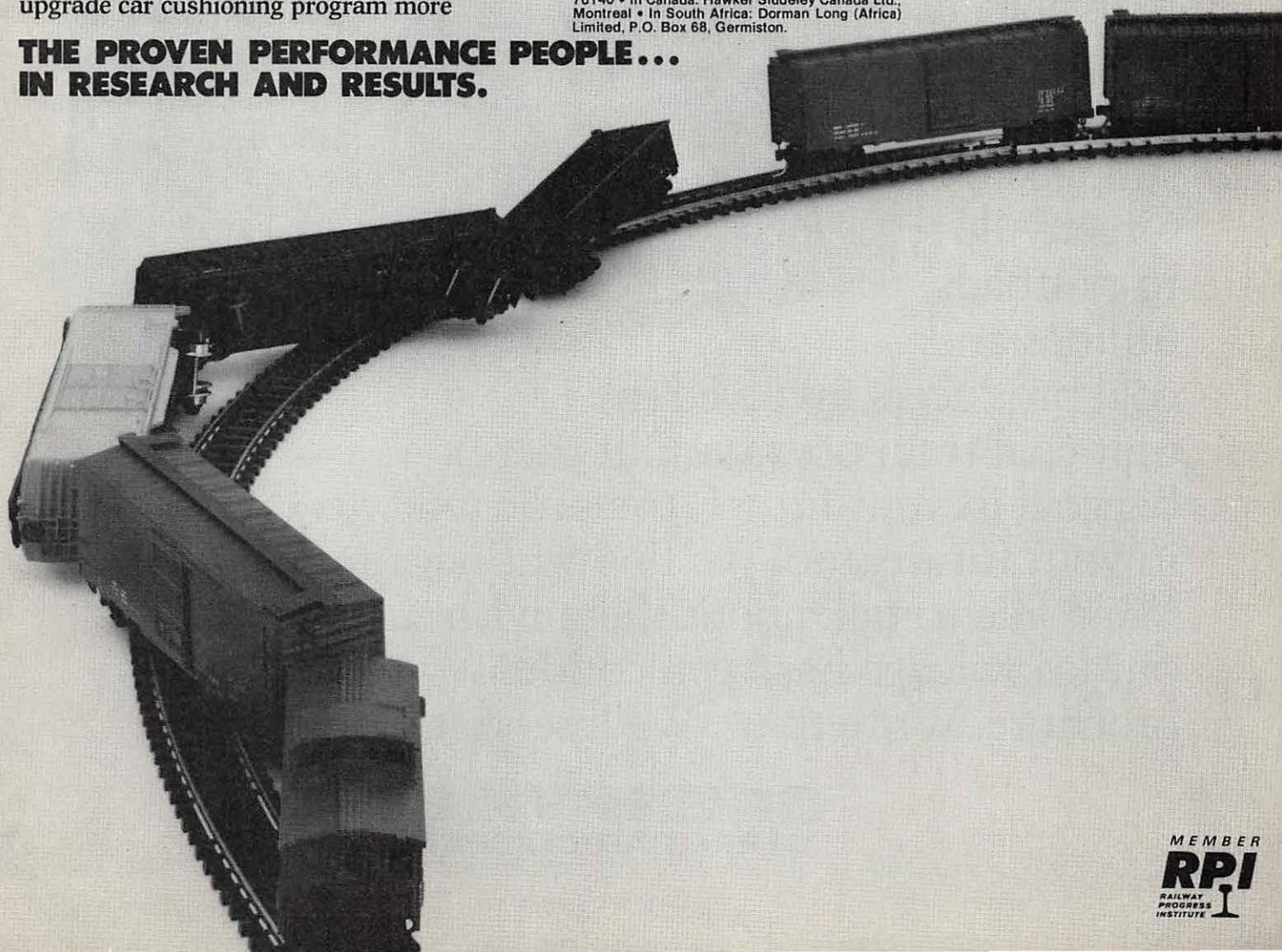
And, it won't hurt to ask him (or write us) for the new booklet "Train Action...fact vs fiction", also. Then you'll know the whole story.

FreightMaster®

A Halliburton Company

In U.S.A.: P.O. Box 40555, Fort Worth, Texas 76140 • In Canada: Hawker Siddeley Canada Ltd., Montreal • In South Africa: Dorman Long (Africa) Limited, P.O. Box 68, Germiston.

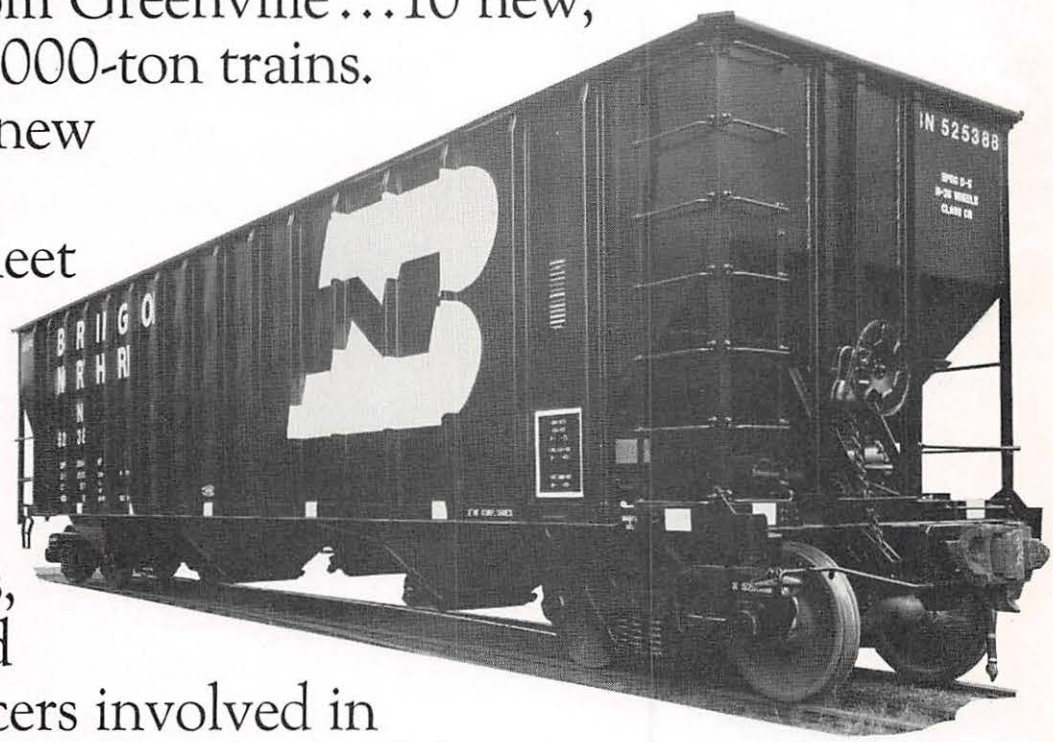
THE PROVEN PERFORMANCE PEOPLE... IN RESEARCH AND RESULTS.



MEMBER RPI RAILWAY PROGRESS INSTITUTE

BURLINGTON NORTHERN gets set for ten new unit coal trains.

The fastest-growing segment of the dynamic Burlington Northern's rail business is moving low-sulphur coal from the West's big new fields to Midwestern utilities. BN's capability will be greatly enhanced by the addition of 1080 100-ton triple hoppers from Greenville...10 new, 100-car, 10,000-ton trains.



This new Burlington Northern fleet is one of many supplied by Greenville to railroads, utilities and coal producers involved in unit coal train operation. If there's big coal in your future, the probability is Greenville's in your future, too. We know about unit coal trains. We'd like to talk about them with you. Some of our knowledge has been condensed in an 8-page brochure. Write to us. We'll send it along.

GREENVILLE
STEEL CAR COMPANY
SUBSIDIARY OF PITTSBURGH FORGINGS COMPANY / GREENVILLE, PENNSYLVANIA, 16125 / PHONE: 412-588-7000

Circle 23 on Reader Service Card

Market Outlook

CARLOADINGS

Loadings of revenue freight in the week ended May 4 totaled 545,126 cars, according to the Association of American Railroads. This was an increase of 2,342 cars, or 0.4%, compared with the previous week, and a decrease of 1,223 cars, or 0.2%, compared with the corresponding week last year. Ton-miles generated by carloadings in the week ended May 4 are estimated at 17.3 billion, an increase of 2.0% above the corresponding week of 1973.

REVENUE FREIGHT CARLOADINGS

Commodity	May 4 week	Apr. 27 week
Grain	25,292	27,566
Farm products	9,374	8,996
Metallic ores	42,883	33,662
Coal	96,476	98,914
Crushed stone, gravel & sand	28,655	28,351
Nonmetallic minerals	15,998	17,173
Grain mill products	18,555	18,727
Food and kindred products	22,654	22,802
Primary forest products	25,384	24,770
Lumber & wood products (except furniture)	16,866	16,994
Pulp, paper & allied products	24,090	23,596
Chemicals & allied products	30,439	30,529
Petroleum products	8,126	8,509
Stone, clay & glass products	23,411	22,665
Coke	8,601	8,956
Metals & products	28,500	48,419
Motor vehicles & equipment	24,352	25,033
Waste & scrap materials	18,893	19,671
Forwarder & shipper assn. traffic	11,700	11,339
All other carloads	64,501	65,429
LCL traffic	376	384
Total cars loaded	**545,126**	**542,485**
Cumulative total, 18 weeks	1974	1973
	9,287,631	**9,182,342**
Estimated revenue ton-miles (billions) 18 weeks	295.0	285.7

PIGGYBACK LOADINGS

U.S. piggyback loadings for the week ended April 27 totaled 31,113 cars (5.9% above the corresponding week last year) and 54,136 trailers or containers (up 6.7% from 1973). Cumulative volume for the first 17 weeks of 1974 is 534,875 cars (up 9.8% from last year) and 927,958 trailers or containers (up 10.7% from 1973).

IN CANADA

7 days ending	Tons of Revenue Freight	Cumulative Totals
April 21, 1974	4,484,239	64,845,517
April 21, 1974	4,499,576	66,987,450

• *BART.*—Directors have authorized an award to Cubic Western Data of a $6.2-million contract for automatic fare collection equipment. Under terms of the agreement, CWD will produce 108 ticket vendors, 67 passenger boarding gates, plus related equipment. Also, CWD has received an $891,000 contract from the Delaware River Port Authority for 69 automated fare collection passenger gates, plus related communications equipment.

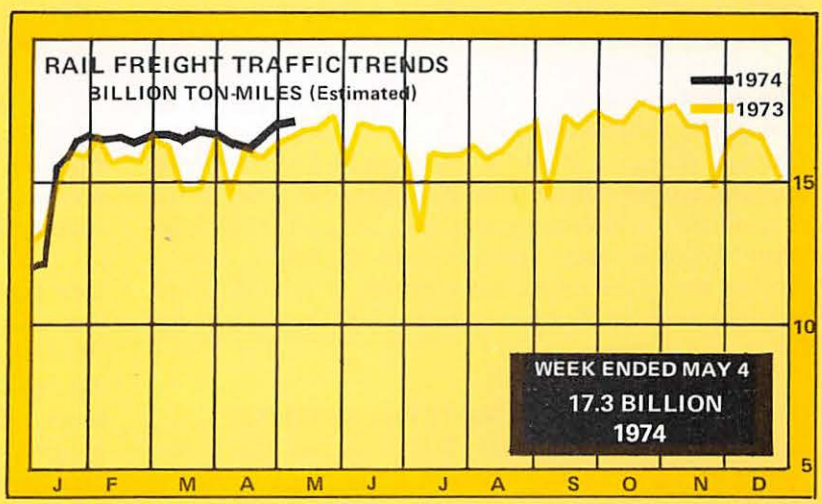
• *Burlington Northern.*—Began preliminary site preparation at Havelock Shops, Lincoln, Neb., for construction of a new automated wheel plant. The two-year, $6.8-million project has been designed with a production capacity of 32,500 wheel assemblies per work shift annually, or 97,500 a year on the basis of a three-shift operation. In 1976, when the facility is in production, BN's annual requirements will be 64,800 wheel assemblies.

• *Illinois Central Gulf.*—Ordered 40 GP-38 diesel-electric locomotives from EMD for delivery beginning in December. ICG has also added three units to a locomotive remanufacturing program at its Paducah, Ky., shops, bringing the total program there to 57 units. The 40 new units and the additional remanufactures will add $13.5 million to ICG's capital program. Under its previously-announced capital budget, ICG will construct 150 60-ft, 100-ton box cars, remanufacture 100 70-ton covered hopper cars and rebuild 48 cabooses, all at company shops at Centralia, Ill.; and rebuild 26 flats and 56 bulkhead flats at its McComb, Miss., shops.

• *MLW Industries.*—Signed a $15-million contract to supply the Cuban government with 30 2,400-hp diesel-electric locomotives, plus spare parts. Also, MLW will supply 15 2,000-hp diesel-electrics to Ferrocarril del Pacifico in Guadalajara, Mexico. The $5-million contract covers spare parts. The 45 locomotives will be built in MLW's Montreal plant.

• *United Purchasers Association.*—Leased 515 covered hopper cars from North American Car Corp. The cars are valued at more than $10 million. UPA is headquartered in Hubbard, Iowa.

• *WMATA.*—Awarded an $8.8-million contract to Westinghouse Electric for the supply of 74 electric stairways for the third phase of the Metro system now under construction.



Source: Association of American Railroads

Moving Freight

AAR'S TRAIN II EQUIPMENT BEING INSTALLED

An IBM 370/158 computer, first unit in the AAR's TRAIN II network, has been installed at the headquarters in Washington, D.C. This third-generation unit, up to four times faster than its predecessor, represents a major expansion of the national freight car information system that keeps track of 2.2 million U.S. and Canadian freight cars. The present system handles up to 300,000 car reports on a peak day and averages about 9 million per month. The new system, to be operational in 1975, will be capable of handling up to 1.4 million reports per day or about 42 million a month. Data will be updated several times daily instead of only once as at present. R.B. Curry, vice president of AAR's Management Systems Department, stresses that while the present TRAIN I reports only car interchanges between railroads, the expanded system will provide information on loadings, unloadings, arrivals, certain waybill data, the crossing of regional boundaries, cars in bad order and cars in storage. AAR's Car Service Division uses such car information in managing the national car fleet.

NW HOPPERS FEATURE HIGH CUBE

Norfolk & Western has produced a prototype of the 2,000 open-top hopper cars which will be rolling out of its Roanoke, Va., car shop starting in December. The $35.7-million order is for cars which each have an increase of 150 cubic feet in capacity over NW's previous high-capacity production hopper cars, assuring that each will be capable of handling a full 100 tons of coal from the Appalachian coal fields.

HARTKE CONCERNED OVER TRUCK FUTURE

"An extremely disturbing parallel" between events leading to collapse of Penn Central and other railroads and what is currently happening to the trucking industry is seen by Senator Vance Hartke (D.-Ind.). Charging that the Administration and Congress have failed to come up with a comprehensive transportation plan for the nation, Hartke told a Chicago trucking meeting that should Northeast rail reorganizations fail, it would be because there is no over-all plan which integrates rail, bus and truck into some rational order and because "economic conditions are changing so rapidly that it is impossible to predict which link in the transportation chain will break under future strain."

CP PLANNING TWO NEW CAR FERRY SERVICES

Ceremonies at Vancouver, B.C., marked the christening of M.V. Incan Superior, a five-track car ferry which Incan Ships, a joint venture of Canadian Pacific and Inchcape & Co., will be placing in service between Thunder Bay, Ont., and Superior, Wis. The 385-foot vessel, capable of handling up to 32 40-foot box cars, will be delivered to Lake Superior via the Panama Canal. It will handle carloads of newsprint and pulp from Great Lakes Paper Co. to railroads in the U.S. at Superior for movement on into the Midwest. Construction has started on a second transporter which will be used as part of a through car service up the St. Lawrence River between Baie Cameau, Que., and U.S. destinations via Quebec City.

MOTEL MODULES MOVED TO MINNESOTA

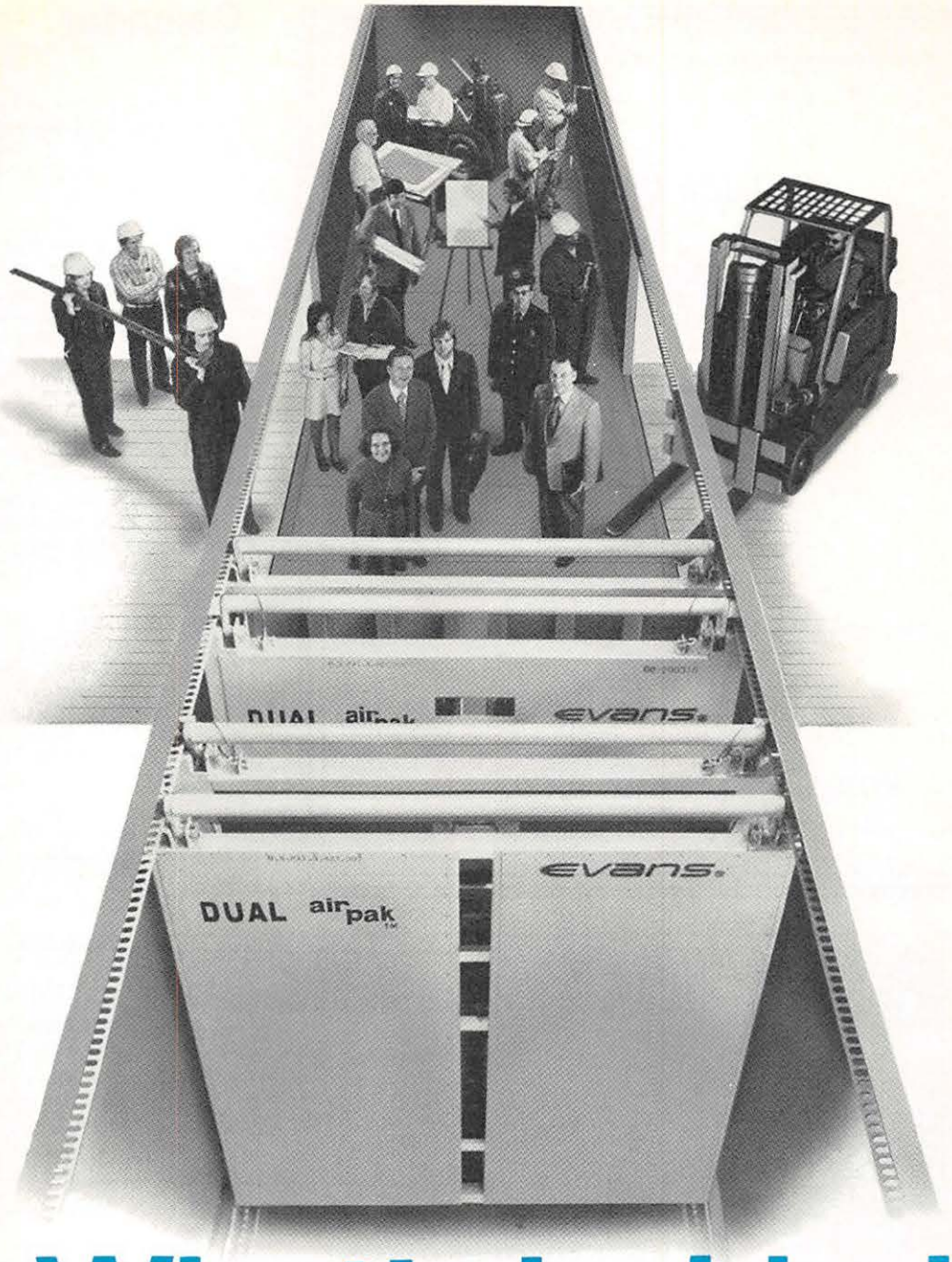
Three trains of pre-cast concrete modules, each of which is a complete motel room, are being originated by Penn Central at East Rochester, N.Y., and are being delivered to Bloomington, Minn., via Rock Island and Minneapolis, Northfield & Southern. Delcrete Corp. produces the pre-cast and completely furnished rooms which are being used as the addition which will produce the five-story, 500-room Bloomington Marriott Inn. Each unit weighs approximately 50,000 pounds complete with interior furnishings and is 12 feet 8 inches wide, 32 feet long and 10 feet high. Modules are loaded two to a flat car. A. Paul Funkhouser, PC's senior vice president-sales and marketing, says rail freight charges will be approximately $95,000, compared with over $368,000 for highway movement.

U.S. FREIGHT WILL BE TRANSWAY

Freight forwarding U.S. Freight has voted to change its company name to Transway International Corp. on June 3. This will indicate the "broadened international scope and diversified activities," according to G. Russel Moir, chairman and president. After record revenues and earnings in 1973, the first quarter of 1974 showed a 28% revenue increase and a 36% net income increase over the comparable 1973 period. The company said that the fuel situation, which caused some shippers to divert quantities of long-haul traffic to rail-forwarder service, contributed to the sharp rise in revenues and income from this segment of its operations.

CAR SUPPLY PICTURE BRIGHTENS

The average daily freight-car shortage dropped to 21,675 during the week ended May 4, lowest since Jan. 6, 1973 when the figure was 20,272. In the first week of March of this year, the average shortage topped 42,000. The shortages of hoppers and 40-ft box cars early in May were the lowest since early fall of 1972 when Russian grain shipments began.



What's behind these bulkheads?

The story behind the Evans bulkhead is a story of people . . . the 500 experienced and concerned people who are responsible for the quality design and precision fabrication that are built into every Evans bulkhead.

The Evans people maintain the largest parts inventory in the business, in order to provide our customers with the fastest service parts delivery available anywhere.

The Evans Story . . . THE PEOPLE STORY . . . is the reason why, last year, 23 railroads, private car lines, and shippers chose Evans bulkheads for use in their freight cars.

The Evans people make the choice easy, which is why Evans leads the field. If you're in the market for bulkheads, whether buying or leasing, look to Evans . . . where initial quality and continuing service make Evans the logical choice!

EVANS
PRODUCTS COMPANY
INDUSTRIAL DIVISION
13101 Eckles Road • Plymouth, Mich. 48170 • (313) 453-7100
CANADA: I.E.C. HOLDEN CO., LTD.
PART OF THE TRANSPORTATION SYSTEMS AND INDUSTRIAL GROUP

Circle 29 on Reader Service Card

This announcement appears as a matter of record only.

$13,125,000

St. Louis-San Francisco Railway Company

Conditional Sale Agreements due May 1, 1975-1989

The Company has sold the above Notes to institutions through the undersigned.

MORGAN STANLEY & CO.

May 8, 1974.

Calendar

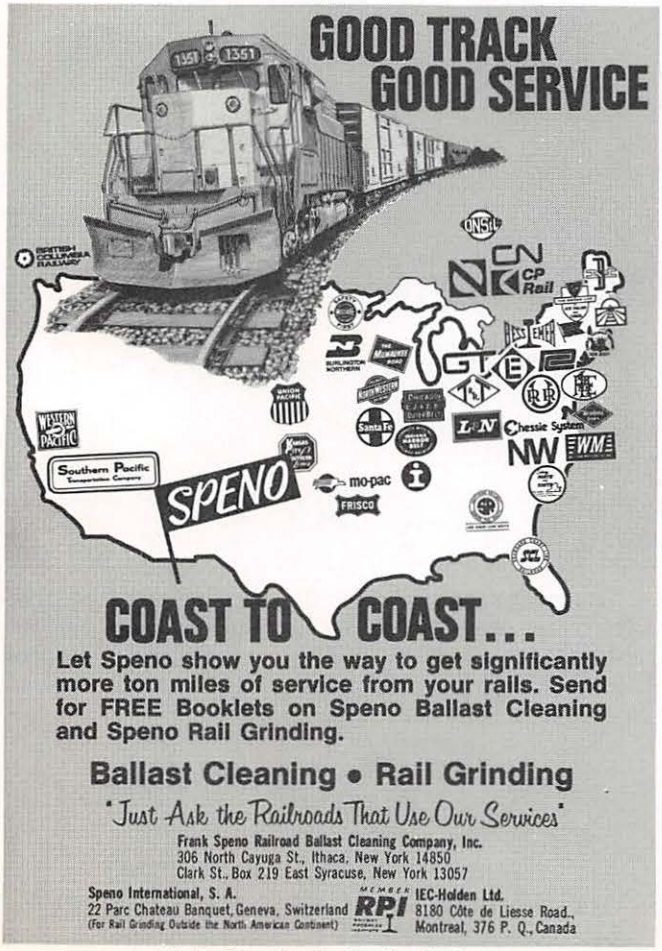
The next meeting of the **American Association of Railroad Superintendents** will be held in the Marriott Hotel, New Orleans, La., on June 11-13, instead of the previously announced June 18-20.

The fourth annual **Regulatory Information Systems Conference** will be held in the Chase-Park Plaza Hotel, St. Louis, Sept. 10-12. RISC is a meeting for state and Federal regulatory agencies, regulated companies and others interested in utility regulation. Further information is available from the Office of Economic Research, Missouri Public Service Commission, Jefferson Building, Jefferson City, Mo. 65101.

"Transportation: Energy, Environment, People" is the theme of the **Joint Transportation Engineering Meeting** to be held in Montreal, Canada, July 15-19, at the Hotel Bonaventure.

Tokyo will be the site of the **Fifth International Wheelset Congress,** Oct. 20-25, 1975. Inquiries should be directed to Hideo Shima, President, Fifth International Wheelset Congress, Shin Sumitomo Building, 3-2 Marunouchi 1-Chome, Chiyodaku, Tokyo, 100 Japan.

Containerization 74 is scheduled for Oct. 23-27 at the Exhibition Grounds in Munich, Germany.


GOOD TRACK
GOOD SERVICE
SPENO
COAST TO COAST...
Let Speno show you the way to get significantly more ton miles of service from your rails. Send for FREE Booklets on Speno Ballast Cleaning and Speno Rail Grinding.
Ballast Cleaning • Rail Grinding
"Just Ask the Railroads That Use Our Services"
Frank Speno Railroad Ballast Cleaning Company, Inc.
306 North Cayuga St., Ithaca, New York 14850
Clark St., Box 219 East Syracuse, New York 13057
Speno International, S. A.
22 Parc Chateau Banquet, Geneva, Switzerland
(For Rail Grinding Outside the North American Continent)
MEMBER RPI
IEC-Holden Ltd.
8180 Côte de Liesse Road.,
Montreal, 376 P. Q., Canada

Circle 30 on Reader Service Card

FOR SALE OR LEASE

RB INSULATED BOXCARS. 40 Ft., 50-ton capacity. Direct inquiries to Box 212, Railway Age, 350 Broadway, New York, N.Y., 10013.

STEEL WANTED

1070 HR carbon sheet
ASTM A 568

3/16" x 13¾" x 183¾"
Not over 5-ton lifts.

Box 214 Railway Age, 350 Broadway, N.Y. 10013

S & S MACHINERY CO.

Can now offer a new heavy duty line of railway machinery & complete systems:

1-Wheel & axle lathes

2-In ground systems

3-Vertical wheel borers & tracers

Manual
Automatic
Programmed

CALL OR WRITE FOR INFORMATION
212 492-7400 Ext. 22

S & S MACHINERY CO.
140 - 53rd Street
Brooklyn, N.Y. 11232

Circle 31 on Reader Service Card

Advertisers Index

ACF Industries, Inc. . . . . BC
Alco Engine Division 26
American Air Filter Co. 41
Berwick Forge and Fabricating 19-20
C.I.M.T. Lorraine 27
Canton Company of Baltimore 53-54
Cardwell Westinghouse Company 9
Chicago, Milwaukee, St. Paul & Pacific RR. Co. 11
Clipper Express Company 30-31
Denver and Rio Grande Western RR. 6
Evans Products Co. 67
FreightMaster 63
L.B. Foster Co. 62
Fruehauf Division 46-47
General Railway Signal Co. 16
German Federal Railroad 60
Grand Hotel 52
Greenville Steel Car Company 64
Harris Corp., Controls Division 32
Hoesch America, Inc. 57
Holland Company 52
Illinois Central Gulf RR. 56
Keystone Railway Equipment Co. 3
Matson Navigation Company 58
MLW-Worthington Limited 21
Missouri Pacific Lines 13
Morgan Stanley & Co. 68
The Nolan Company 62
Albert Pick Hotels & Motor Inns 52
PPG-Fiber Glass 61
Pullman, Inc. 22-23
Raygo Wagner . . . . . IBC
Research Products/Blankenship . . . . . IFC
Santa Fe Industries, Inc. 17
Seaboard Coast Line Railroad 50-51
Servo Corporation of America 14-15
Southern Pacific Transportation Co. 25
Frank Speno Railroad Ballast Cleaning Co., Inc. 68
Standard Card Truck Co. 45
Standard Railway Equipment Division 4
Union Pacific Railroad 29
Unity Railway Supply 49
Welded Tube Co. of America 42-43

RAILWAY AGE
ADVERTISING
SALES DEPARTMENT

Chicago, ILL. 60602
29 E. Madison St.
(312) 641-5815
Reid Kenedy—vice president—sales
John M. Brennan
regional sales manager

New York, N.Y. 10013
350 Broadway
(212) 966-7700
W. Arthur Cubbage
regional sales manager

Pittsburgh, Pa. 15237
1514 Northway Mall
(412) 366-0100
Ronald M. Giallonardo
regional sales manager

Dallas, Tex. 75206
Noel Page Building
6400 N. Central Expressway
(214) 361-6972
Joseph Sanders

Los Angeles, Cal. 90025
11704 Wilshire Blvd.
(213) 477-4004
Fred Klaner, Jr.
Philip O. Bowers

Ormond Beach, Fla. 32074
750 Lindenwood Circle, East
(904) 672-6031
C. James Fisher
regional sales manager

Sausalito, Cal. 94965
3030 Bridgeway Building
(415) 332-1481
(415) 332-1482
Lewis A. Vogler

London S.W. 1Y6, England
01-839 6318
67/68 Jermyn St., St. James's
Kenneth J. Hendry

Manchester M225RQ, England
Haletop
Wythenshawe Civic Center
Ian Goulden

Paris, 8e, France
70 Rue de Ponthieu
Stephen Brown-Joussard

4 Dusseldorf-Nord
Eitelstrasse 32
E. Hillerbrand
Ronald Fischer

Tokyo, Japan
Sun Gain Shia, Ltd.
Shiba Nikkatsu Bldg.
13, Shiba Park
Minato-Ku
C.H. Yiu, Managing Director

DCO The De Leuw, Cather Organization CONSULTING ENGINEERS
165 W WACKER DRIVE • CHICAGO 60601
SUBWAYS • RAILROADS • SIGNAL SYSTEMS • PUBLIC TRANSIT • TRAFFIC • PARKING
HIGHWAYS • BRIDGES • PORT DEVELOPMENT • COMMUNITY PLANNING • URBAN RENEWAL
AIRPORTS • MUNICIPAL WORKS • INDUSTRIAL • ENVIRONMENTAL SCIENCE AND ENGINEERING
BOSTON • BUFFALO • NEWARK • NEW YORK • OKLAHOMA CITY • PHILADELPHIA
PORTLAND, OR • SAN FRANCISCO • SEATTLE • WASHINGTON D.C.

AAR WRITE UP CO-ORDINATOR

Use your AAR Write Up skills and railroad industry knowledge to help you move up with our well established Fortune 200 corporation. We are a top railroad car manufacturer and lessor and our growth orientation necessitates the opening of an additional new repair facility.

You will be responsible for establishing a complete AAR write up function. Experience in defect coding, repair pricing, inspection and machine billion coupled with an understanding of EDP systems is necessary.

This is a key position in our organization and the salary level is highly competitive (including bonus) and will be based on individual ability and experience. Supurb benefit package. Submit your resume including salary history in confidence to BOX No. 216, RAILWAY AGE, 350 Broadway, New York, N.Y. 10013.

EQUAL OPPORTUNITY EMPLOYER

PARSONS BRINCKERHOFF QUADE DOUGLAS
Engineers
Designers Planners
Evaluations & Operations Studies
Bridges • Terminals
Rapid Transit Systems
ONE PENN PLAZA, NEW YORK, NY 10001
Atlanta, Boston, Denver, San Francisco, Trenton, Washington, DC

USEABLE SECOND-HAND RAILROAD CAR REPAIR PARTS
IRON & STEEL SCRAP
RAILS & ACCESSORIES
PLANT DISMANTLING
RAILWAY EQUIPMENT LEASING
RAILWAY CAR PARTS & SUPPLIES
RAILWAY CARS

THE PURDY CO.
Executive Office—
2400 W. 95th St.
Chicago, Ill. 60642—239-4200
BRANCH OFFICE & YARDS
MADISON, ILLINOIS
OAKLAND, CALIF.
LONG BEACH, CALIF.
BELEVUE, WASH

TRANSPORTATION CONSULTANTS

PUBLIC TRANSIT	RAILROADS	TRUCKING	INDUSTRIAL
•Operations	•Acquisitions and Mergers		•Planning
•Valuations	•Reorganizations		•Financial

WYER, DICK & CO.
(A Subsidiary of Edwards and Kelcey, Inc.)
New York, Boston, Minneapolis, Philadelphia, Sao Paulo, Madrid, London
Central Office: 8 Park Place, Newark, N.J. (201) 621-7050

BECHTEL
▪ Engineers & Constructors
▪ Railroad Planning
▪ Project Management
P.O. Box 3965, San Francisco, Ca. 94119 • (415) 764-6945

FOR SALE

NEW Orton Diesel Locomotive Cranes 25-T & 50-T Capy. for either 36", 39-3/8" or 42" Gauge. Especially adaptable for steel mills. Specs on request.

Striegel Supply & Equipment Corp.
6001 Chemical Road, Baltimore, Md. 21226 Tel. 355-7922, 7923

TIMETABLE RACKS

Authentic Reproductions, hand-crafted from solid oak, natural finish. 24 pockets, $110; 35 pockets $150, plus shipping. **Railway Age Box 207, 350 Broadway, New York, N.Y. 10013.**

Viewpoint

L&D—It's time for an industrywide campaign

Consultants get well-fixed and governments seem to survive and academicians prosper on theory. But there's an old saying among reporters, who are supposed to deal in facts, that "He who theorizes gets easily lost." Still, there are occasions when even the most dedicated fact-finder has to fall back on theory—even theory based upon generalities, and that's the worst kind.

For instance, in the context of the rail freight-loss-and-damage situation, you could make a couple of observations: (1) Poor railroads are made poorer by poor L&D performance; and (2) over-all industry improvement in L&D prevention proves nothing so much as it proves the need for continuing and coordinated quality-control programs at the national level.

OK, look at No. 1. The industry ratio of L&D payout-to-revenue last year was 1.56. Figure 2.00-and-up as a worrisome figure. Look at the statistics, and whom do you find at 2.00-and-up? A few bankrupts and a couple of roads which are less than prosperous—Penn Central, Erie Lackawanna, Lehigh & Hudson River, Katy, Rock Island, Delaware & Hudson. So, you decide that the L&D ratio really points a finger. But then you look at the others in that 2.00-and-up group, and you wonder—Kansas City Southern/Louisiana & Arkansas, Cotton Belt, Chicago & North Western. Then you flip to the list of roads under 1.00, and there, big as life, you find Reading at 0.65. And you decide that maybe it is time to go on to theory/generalization No. 2—having to do with industry-level prevention programs. And you find the point more provable, because if you look at payout figures on a commodity-by-commodity basis you find that progress has been made where concentrated, coordinated, continuing efforts have been made. Conversely, you find that performance has slipped when the effort has tailed-off. Two cases in point: (1) The most comprehensive national-level program in existence involves damage-prevention on household appliances, and for four consecutive years payout has declined; but (2) on grain-mill products an action program that produced a 9%-plus decline in payout in 1972 was not pursued in 1973 and payout went up by more than 7%.

There are, no doubt, railroad officers who will look at the payout figures—which show a small drop in '72, a bigger one last year—and decide that "We've got the problem licked." There are also, no doubt, L&D-prevention people who just are not ready to attract a lot of management attention with the kind of money-and-manpower requests that will someday have to come if the industry is to get a real handle on the L&D-prevention problem.

PAYOUT IS ONLY THE TIP OF THE ICEBERG

It's convenient, of course, to say that railroad net income would soar—comparatively, at least—if the L&D leak could be plugged. Of course, too, that is not quite accurate—since effective prevention programs are going to cost money. The point is that $232 million in payout is only the tip of the iceberg: In no way can it take into account the effect of L&D in turning off customers.

To wrap it up, when the effort is made, the results are impressive. To wrap it up, there are several commodities—look at motor vehicles and parts—where traffic-building efforts are fighting against rising L&D. To wrap it up, it is time for an industry effort—one that will allow the L&D people do broadly what they have proved they can do narrowly.

RAILWAY AGE

READER SERVICE CARD

FREE: More information on: products and equipment in

Advertisements
New Products Report
New Literature Section

Just circle numbers on attached postage-paid card, matching those under the ads, new products or literature that interest you.

Print your name, title, company name and address. (Readers outside the U.S., please affix correct postage).

Please fill in classification at bottom of card.

Put in the mail—we'll do the rest. Express Service processing will speed your inquiry to the proper firm.

—the editors

This card usable for 90 days from date of issue.

Name _____ Title _____

Company _____

Street _____

City _____ State _____ Zip _____

1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27
28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54
55	56	57	58	59	60	61	62	63
64	65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80	81
82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99
100	101	102	103	104	105	106	107	108
109	110	111	112	113	114	115	116	117
118	119	120	121	122	123	124	125	126
127	128	129	130	131	132	133	134	135

CLASSIFICATION INFORMATION
Please circle letters on data which apply to you.

FUNCTION
A Executive
B Operations
C Purchasing
D Mechanical
E Engineering
F Sig. & Comm.
G Traffic Mgt.

BUYING INFLUENCE
H Recommend
I Specify
J Approve
K None

If you would like to subscribe to Railway Age, check a box
☐ 1 yr. $8.00
☐ 2 yrs. $12.00

May 27, 1974

RAILWAY AGE

READER SERVICE CARD

See other side of this card for FREE additional information on products and equipment in this issue's

Advertisements
New Products Report
New Literature Section

Use the postage-paid reply card to obtain further details on products that interest you.

—the editors

First Class
Permit No. 153
New York, N.Y.

BUSINESS REPLY MAIL
NO POSTAGE STAMP REQUIRED IF MAILED IN THE U.S.A.

Postage will be paid by:

Railway Age
P.O. Box 530
Bristol, Conn. 06010

PC-90 PIGGY PACKER

- Pick, pack, place all trailers and containers . . . fast.
- 90,000 pound capacity.
- Handles containers from top or bottom.
- Handles trailers from bottom.
- Transports and stacks containers.

RAYGO WAGNER

PIGGY PACKERS & PORT PACKERS

Intermodal Equipment Leaders

Rugged...Reliable...Rapid...

PC-80 PIGGY PACKER

- Versatile TOFC, COFC handling unit.
- Slightly less sophisticated than PC-90.
- 80,000 pound capacity for lower volume yards.
- Will handle containers from top or bottom.
- Handles trailers from bottom.
- Transports and stacks containers.

MH-80 PORT PACKER

- Top lifts containers. Fixed or adjustable spreaders.
- 80,000 pound capacity.
- Triple stacks 9 foot containers.
- Converts to forks in 2 minutes.
- Has bottom pick trailer option.
- Slings attachment available.
- Maximum versatility.

Seven models to choose from. Capacities from 50,000 to 90,000 lbs. Universal service...standard components. Ask about our yard layout, job study service, leasing, maintenance and service programs.

MANUFACTURED BY

RAYGO WAGNER
4427 N.E. 158th AVENUE
PORTLAND, OREGON 97220

SALES AND SERVICE NATIONALLY BY

HOWARD COOPER CORPORATION

HOME OFFICE: 8501 N.E. KILLINGSWORTH • PORTLAND, ORE. • P.O. BOX 3704 • PHONE 503/252-2441
BRANCHES: Seattle, Washington 206/762-0510 • Spokane, Washington 509/924-4520 • Eugene, Oregon 503/688-7221 • Roseburg, Oregon 503/672-6634 • Medford, Oregon 503/779-1073 • Chicago, Illinois 312/593-8987 • Alexandria, Louisiana 318/445-6401 • Atlanta, Ga. 404/633-8531 • Edison, N.J. 201/225-1818

Circle 2 on Reader Service Card

ACF's Center Flow car empties emptier.

The Center Flow® car discharges lading along its center line cleanly and quickly because there is no center sill to get in the way of unloading. The lading pours out in a rapid, unobstructed flow with no bridging or hanging up. That saves you time and therefore money. But there are other ways the Center Flow car can save you money too.

Since it empties fast and clean, shakers are seldom needed. So there's less chance of car damage. The Center Flow car has a "clean bore" interior with no internal carlines or stiffeners. That means linings last longer and lining maintenance costs go down. It also means that the car empties emptier, with less chance of residue from one load contaminating the next.

Center Flow cars come in a complete range of sizes from 2970 to over 5700 cubic feet. A big selection of hatch and outlet types makes them adaptable to any covered hopper task.

If you're thinking about new covered hoppers, talk to the ACF man about Center Flow cars. You get more out of them. ACF Industries, Inc., Amcar Division, Main and Clark Streets, St. Charles, Missouri 63301.

MEMBER RPI RAILWAY PROGRESS INSTITUTE

acf ACF INDUSTRIES